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NOTICE.

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JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

FEBRUARY, 1839.

Statistics of the City of New York. By CHARLES BOWLES FRIPP, Esq.
Communicated to the Bristol Statistical Society, Nov. 1838.

Introduction.—History and Situation of New York.—Population, Mortality, &c.—Finances, &c.—Commerce:—Packets; Railways; Water-Works; Fuel; Auctions, &c.; Insurance and Banking Companies; Savings' Banks; and Post-Office.—Literary, Educational, and Religious Institutions.—Churches, Benevolent Societies, &c.: Long Island Farms; Juvenile Delinquents; Institutions for the Blind, Deaf, and Dumb.—Medical Institutions:—Hospitals; Dispensaries.—Legal Institutions.—Conclusion.

THE Society having been presented with numerous Statistical documents relative to the City of New York, through the kindness of H. G. Dannel, Esq., the City Inspector, I have collected from them the following summary of facts illustrative of its commercial and social condition. At the present period, when the intercourse between this country and the United States is receiving a new stimulus from the establishment of Transatlantic steam navigation, it becomes doubly interesting to obtain an accurate knowledge of their internal economy, as well as of our mutual relations; and as the port of Bristol more particularly may claim the honour of having taken the lead in this memorable application of steam power, and must in future (if awake to her own interests) be intimately connected with the great emporium of the Western World, it is the more incumbent on us to cultivate, not only the feelings of neighbours, but such an acquaintance with American institutions and resources as may qualify us for an intelligent appreciation of their real character and influence. It is with the hope of contributing to this important end, by the evidence of *facts*, that I lay before the Society the following Paper, which will be found to comprise the fullest and most recent account of the Statistics of the city of New York, which the documents in possession of the Society will authenticate. It has not been thought necessary to refer to these in detail, a list of them being appended to the Society's Report for the last year.

For the sake of more easy comparison, I have reduced the gross numbers in most instances to a per centage proportion; and, in calculating the monetary tables, I have taken the value of the dollar at 4s. 6d. sterling.

I.—HISTORY, SITUATION, AND GOVERNMENT.

From various authorities it appears that the Hudson River, and the island on which New York is situated, were discovered in the year 1609. In 1612 New Amsterdam (now New York) was founded by the Dutch;

and, as early as 1610, the Dutch West India Company sent a ship to Hudson River to trade, and the first emigrants devoted themselves exclusively to traffic. In 1644 the first City Hall was erected. In 1664 the place was taken by the British; in 1673 retaken by the Dutch, and in 1674 again taken by the British.

In 1673 the first post-rider commenced his trips to and from Boston once in three weeks; and in 1732 the first stage began to run between these two cities, and was fourteen days on the journey.

In 1688 the assessors valued the whole property of the city at 78,750*l*. In 1836, not quite a century and a half afterwards, the valuation amounted to nearly 70,000,000*l*. sterling.

In 1699 the population of the city was 6,000; in 1774, 22,750; in 1790, 33,131; in 1800, 60,489; 1810, 96,373; 1820, 123,706; 1830, 202,589; and, in 1836, it amounted to nearly 300,000.

On the 21st September 1776, 492 houses, being one-eighth part of the city, were burned down. On the 18th December 1804, a great fire destroyed forty stores and dwelling-houses, and property valued at from 300,000*l*. to 400,000*l*. In 1811 there was another great fire, and in 1835 (16th December) a still more fatal one, when the loss was estimated at four and a half millions sterling.

The geographical position of New York is of the most favourable nature for her commercial greatness. Situated on an island, and at the confluence of three rivers, her proximity to the ocean invites traffic from all quarters, and her communications with the interior are admirably fitted for the reception and distribution of produce and merchandize of every kind. The East River leads in the commerce of New England, and the Hudson brings down the products of the North and West; whilst the Raritan connects the latter river and the Delaware, and opens additional channels of communication.

The Hudson River is generally closed by ice from the beginning of December to the middle of March. The longest period for which it has been closed during the last twenty years was 125 days in 1835-36 (from 30th November to 4th April), and the shortest period was 50 days (from 25th November to 8th February) in 1827-28. Lake Erie is seldom open until the end of April.

Local Government.—The city of New York was first incorporated by a charter of King James II. in 1680, which was confirmed by George II. in 1730, and by the governor, council, and General Assembly, in 1732. An amended charter was passed by the State Legislature in 1830, under which the local government consists of a mayor and common-council, elected annually by the people. The common-council consists of a board of aldermen and a board of assistants, each of seventeen members, being one alderman and one assistant from each of the wards into which the city is divided. A Recorder is also appointed by the governor and senate of the state.

At the election of Mayor in April, 1837, there were three candidates, distinguished as "*Whig*," "*Tammany*," and "*Loco-Foco*" or "*Anti-Bank*." The number of votes for the successful (Whig) candidate, Aaron Clark, Esq., was 17,044, and the total number of votes 34,999, exclusive of 27 "scattering votes."

By the amended charter it is provided, that "the executive business

of the city shall be performed by distinct departments, which it shall be the duty of the common-council to organize and appoint for that purpose." It is also declared to be the duty of the common-council to publish, two months before the annual election of charter officers, in each year, for the general information of the citizens, a full and detailed statement of the receipts and expenditure of the corporation during the year then closed.

The town officers elected annually by the people are, 1st, the supervisors. For the city of New York the mayor, recorder, and aldermen, are supervisors. 2nd, town-clerk; 3rd, collector; 4th, constables; 5th, assessors; 6th, overseers of the poor; 7th, commissioners of highways; 8th, commissioners and inspectors of common schools. There is also a board of auditors of town accounts, composed of the supervisors and town-clerk, together with four justices of the peace, or any two of such justices.

II.—POPULATION, &c.

By the census of 1835 the population of New York was 270,089. In 1825 it was 166,086, and in 1830, 202,589; the increase in these intervals of *five* years being respectively at the rate of 22 and 33 per cent. At the mean rate of increase the population at the present time (November, 1838,) must amount to nearly 350,000, thus doubling within the term of *fourteen* years.

The following table shews various particulars of the population, and the number of marriages and births in the year preceding the census.

Population of the City of New York, 1835.

	Per cent.		Per cent.
Males . . . 131,624 . . .	48·73	Whites . . . 254,892 . . .	94·4
Females . . . 138,465 . . .	51·27	People of Colour, 15,197 . . .	5·6
	<u>270,089</u>		<u>270,089</u>
	100.		100.
Males subject to Military Duty . . .	23,658	or 1 in 11·4 of population.	
„ entitled to Vote . . .	43,091	„ 1 „ 6·2	„
„ Aliens* . . .	27,669	„ 1 „ 10	„
Females, Married, under 45 . . .	39,975	or 28·87 per cent.	„
„ Unmarried, between 16 & 45 . . .	35,697	„ 25·78	„
„ „ under 16 . . .	46,503	„ 33·58	„
„ Married and Unmarried, above 45 . . .	16,290	„ 11·77	„
Persons of Colour not taxed . . .	14,977		
„ „ taxed . . .	152		
„ „ entitled to Vote . . .	68		
Paupers . . .	1,799	or 1 in 150 of population.	
Deaf and Dumb . . .	175	„ 1 „ 1,543	„
Blind . . .	105	„ 1 „ 2,572	„
Idiots . . .	32	„ 1 „ 8,440	„
Lunatics . . .	32	„ 1 „ 8,440	„
Marriages during the preceding year . . .	1,990	or 1 to 136 of population.	
Births during the preceding year, Males . . .	4,528	or 50·53 per cent.	
„ „ Females . . .	4,432	„ 49·47	„
Total . . .	8,960	or 1 in 30·14 of population.	

* Female aliens were omitted in the census of 1835, but are estimated at about 27,000, which would make the total number of aliens one-fifth of the population.

The Deaths in New York, in 1837, amounted to, Males, 4,712 or 53·96 per cent.
 ,, ,, Females 4,020 ,, 46·04 ,,

Total, including 550 still-born and premature . 8,732 100·

In 1836 the Deaths, including 506 still-born, &c., were 8,009.

The following table shews the mortality at different ages, divided into ten periods, during the years 1836 and 1837, and the average mortality at the same ages during the thirty-two years, from 1805 to 1836, inclusive. The whole number of interments in these thirty-two years amounts to 132,426; viz., males, 73,714; females, 58,712; making an excess of mortality, of males, of 15,002, or 11·32 per cent. In estimating the mortality under 5 years of age the still-born have been excluded.

Mortality.	1836		1837		1805 to 1836, inclusive.	
	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.
Under 5 years of age	3,681	49·06	3,908	48·00	49,531	39·46
Between 5 and 10 years	315	4·20	369	4·55	5,023	4·
,, 10 ,, 20 ,,	303	4·04	334	4·10	5,899	4·70
,, 20 ,, 30 ,,	927	12·36	1,062	13·04	16,628	13·25
,, 30 ,, 40 ,,	945	12·60	943	11·58	17,095	13·62
,, 40 ,, 50 ,,	551	7·34	657	8·07	12,512	9·97
,, 50 ,, 60 ,,	309	4·11	375	4·60	7,785	6·20
,, 60 ,, 70 ,,	233	3·10	243	2·99	5,385	4·28
,, 70 ,, 80 ,,	148	1·98	162	1·99	3,541	2·82
,, 80 and upwards	91	1·21	89	1·08	2,102	1·70
Still-born and prema- ture }	7,503	100·	8,182*	100·	125,501	100·
	506	..	550	..	6,925	
Total	8,009	..	8,732	..	132,426	

The Interments in 1837, were, in the cemeteries belonging to the following denominations:—

The Public, or Potter's Field	2,139
Roman Catholic	2,707
Methodist	1,262
Presbyterian	1,079
Episcopalian	905
Dutch	406
Baptist	149
Friends	56
Hebrews	29

Total 8,732

Whites, including 505 still-born . . 7,985 . . 91·41 per cent.
 Coloured, including 45 still-born . . 747 . . 8·56 ,,

Total 8,732 100·

* Including 40—ages unknown.

The rate of mortality, according to the population (still-born excluded) has been—

In 1805, population, 75,770; deaths, 2,297; or 1 to 32·98	
1810 ,, 96,373 ,, 2,073 ,, 1 ,, 46·49	
1815 ,, 100,619 ,, 2,405 ,, 1 ,, 41·83	
1820 ,, 123,706 ,, 3,326 ,, 1 ,, 37·19	
1825 ,, 166,086 ,, 4,774 ,, 1 ,, 34·78	
1830 ,, 197,112* ,, 5,198 ,, 1 ,, 37·92	
1835 ,, 270,089 ,, 6,608 ,, 1 ,, 40·87	

The mean average duration of life, in New York, is estimated to have been 25·45 years, between 1830 and 1835, inclusive; and only 22·05 years in 1836.

On the average of the thirty-two years, from 1805 to 1836, inclusive, the mortality in the different months is represented in the following order; the total being taken as 10,000, and the months taking precedence according to their relative proportions:—

1. August 1,248	7. January 754
2. July 1,060	8. November 753
3. September 1,008	9. February 739
4. October 850	10. April 714
5. December 776	11. May 707
6. March 755	12. June 636

Of the total number of Deaths in 1837, it appears that there were occasioned by diseases of

		Per Cent. (excl. still-born).
The brain and nervous system	1,588	19·41
The respiratory system	2,380	29·09
The circulatory system	604	7·38
Eruptive fevers	1,228	15·00
Digestive system	1,439	17·59
Urinary and genital system	94	1·15
Sundry:—cancer, abscess, scrofula, } rheumatism, &c. }	189	2·31
Unknown disease	57	0·70
Intemperance and delirium tremens	128	1·56
Suicide	42	0·51
Casualties, killed, &c.	281	3·43
Old age	122	1·50
Malformation	30	0·37
	8,182	100·00
Still-born and premature	550=6·3 of Total.	
Total	8,732	

The comparative mortality in New York among the natives of Great Britain and other parts of Europe, from certain diseases, is thus shewn:—

	Total Deaths.	Natives of Great Britain.	Natives of European Continent.
Apoplexy	129	49	7
Consumption	1,458	542	50
Typhus	338	151	22
Child-bed and puerperal fever	64	36	2
Suicide	42	15	7
Casualties	79	41	7
Old age	122	44	10

“Of the total deaths,” remarks the City Inspector, “from Consumption, 592 were natives of Great Britain and Europe; and the whole

* In another document the Population in 1830 is stated at 202,589.

number of deaths belonging to the same countries being 1,869, it follows that 1 out of 3·25 died of this disease; and of the whole remainder 1 in 7·66: but if we deduct the deaths of coloured persons of the same disease, which were 1 in 4·25, it leaves the deaths by consumption of the white natives of this country as only 1 in 9·47; a disparity very great and unexpected." He also observes, that scarlet fever has been increasing in New York, within a few years, to a vast extent. Although it is a disease of recent origin, it has to all appearance become one of the diseases through which mankind must, almost necessarily, pass, like measles, small-pox, &c; and occurring in the early period of life, it is one source of the greater fatality, under five years of age, which has prevailed for some years past*.

Places of Nativity of those who Died in 1836 and 1837.

	1836	1837	Total.	Per Cent.
England and Wales	320	307	627	3·74
Ireland	1,378	1,206	2,584	15·43
Scotland	99	74	173	1·03
Total of Great Britain and Ireland .	1,797	1,587	3,384	20·20
Germany	213	198	411	2·46
Other European Countries	103	84	187	1·12
British America and West Indies . .	21	30	51	
South America, Africa, and Asia . .	3	6	9	0·40
At Sea	3	3	6	
Unknown	148	184	332	1·98
Total Foreign States	2,288	2,092	4,380	26·16
The United States	5,721	6,640	12,361	73·84
Total	8,009	8,732	16,741	100·00

No register of births is kept in New York, though the project has been agitated several times. The city of Philadelphia possesses a register of this kind; and it is hoped that New York will not be long without one. An accurate account could then be kept of the rate of mortality, proportioned to the population.

III.—FINANCES, &c.

The rapid increase of property in New York is shewn by the following comparison of the Assessments and City Taxes at various periods within the present century:—

Years.	Assessments.	City Taxes.	Rate per Cent.
1805 .	£5,770,320	£28,788	0·49
1815 .	18,368,109	44,530	0·24
1825 .	22,761,010	75,795	0·33
1834 .	41,973,414	188,011	0·45
1835 .	49,212,833	191,250	0·39
1836 .	69,637,707	244,154	0·35

* It appears that some interments take place without the city of those dying within the corporate limits, of which no returns are made to the City Inspector. These are stated to be yearly becoming more numerous; and it is most desirable that an account of them should be kept, in order to form an accurate opinion of the mortality of the population. This could be effected by requiring certificates of the physician or coroner to be delivered to the ferry and bridge-masters, as now required of the sextons in the city.

This is exclusive of the property belonging to the corporation, valued at 2,250,000/.; and of the estates and properties of the various churches, schools, and universities.

In 1835 the assessment of <i>real</i> estate was	32,339,796 <i>l.</i>	; of <i>personal</i>	16,873,037 <i>l.</i>
In 1836 " "	52,592,018 <i>l.</i>	" "	17,045,688 <i>l.</i>

Being an increase in one year of, in *real*, 20,252,222*l.*; and *personal*, 172,651*l.*

On the 31st of December, 1836, the city debt amounted to . . . 243,473*l*.

the balance in the Treasury at the	}	19,455.
credit of the Sinking Fund Commissioners		

The city expenses in 1836 (actual net payments) amounted to 376,921*l.*, including the following items:—

Alms-house, Bridewell, and Penitentiary	£46,240
Cleaning streets (balance*)	30,971
Lamps	19,862
Docks and Slips	32,088
Elections	1,665
Fire Department	13,493
Hall of Justice, and House of Detention	34,790
Markets (new)	11,203
Printing and Stationery	5,117
<i>Public schools</i>	19,864
Police and Watch	41,533
Roads	8,981
Salaries	11,097
Streets and Street Expenses (balance)	18,206
Water Commissioners, Pipes, &c.	17,070
Sundries	64,741
	<hr/>
	376,921
Payments to Mechanics' Bank and Interest on }	9,173
City Aqueduct Loans (balance) }	
Total	<hr/> £386,094

The corporation receipts (exclusive of 211,970¢. received and repaid on sundry accounts) amounted in the same year to 386,294¢., of which were received on account of

The Alms-house, Bridewell, and Penitentiary	£6,092
Bonds repaid	45,000
Commutation fees on alien passengers	8,401
Intestate estates	3,811
Life and Trust Company	87,200
Mayoralty fees	682
Police	1,598
Rents	21,740
Licenses	6,655
Taxes	194,985
Vendue sales	2,250
Wells and pumps	786
Sundries	7,094
Total	£386,294

The balance in favour of the corporation on the 31st December 1836, was only 200/.

Of the items specified in the foregoing accounts, two or three deserve a more particular notice.

* After deducting receipts (9,413%) for sales of manure.

Alms-house, &c.—In June 1837, the whole number of paupers in the alms-house, hospital, and Long Island farms, was 2,453, including 871 children, chiefly American. In the penitentiary and bridewell were 335 male prisoners, and 286 females, white and coloured, making a total of 3,074 paupers and prisoners under the care of the commissioners of the alms-house; or, deducting the children, 2,203. In September, 1837, the total number was 3,332, of whom 2,045 were foreigners, and 1,287 native Americans. In the year ending the 10th September 1837, an increase had taken place of 1,005 inmates, of whom 887 were foreigners. Of the 1,209 patients treated in the hospital in 1837, 982 were aliens, and only 227 were born in America. The city authorities are very anxious for a change in the laws affecting the introduction of aliens, a large portion of whom consist of women and children, and many of them sickly or crippled persons, who have nearly exhausted their substance on the passage, and become burthen-some to the city on their arrival. Scarcely a vessel arrives from certain ports of Europe with steerage passengers which does not increase the applicants for admission into the Alms-house. Very stringent regulations to prevent the ill effects of pauper immigration are suggested by the mayor in his message to the Common Council of the 22nd of May 1837.

It is stated on good authority that the cholera pestilence of 1832, which swept away thousands of the inhabitants of New York, had its origin in the alms-house. It is proposed to remove the present establishment, which occupies about thirty acres of land, to Blackwell's Island, a spot about four miles distant from the city, and to increase the commutation fees on emigrants, so as to check the introduction of paupers.

Markets.—There are 14 Markets in New York, the annual revenue of which, in 1836, was upwards of 9,500*l*.

Police.—In addition to the police attached to the courts of justice, &c., there are about 850 watchmen, including their officers, employed in the city, at an annual expense of nearly 36,000*l*. In March 1836, the watchmen petitioned the Common Council to increase their pay from 4*s*. 6*d*. to 5*s*. 7½*d*. per day, which was granted in the November following.

Licenses.—The Licenses issued in New York in 1836 were, tavern and excise 2,863, cartmen 3,200, porters 150, hackney-coaches and omnibuses 330, pawnbrokers 11, dealers in second-hand articles 54, other dealers and traders 86: total 6,694.

New Buildings.—From the reports of the City Inspector it appears that the number of new buildings, from 1835 to 1837, inclusive, has been as follows:—

	1835.	1836.	1837.
Dwellings of brick, stone, or wood	866	868	550
Stores, factories, stables, &c.	374	938	274
Banks, hotels, and public offices	3	2	0
Churches of brick, stone, or wood	11	13	8
Schools, lyceums, &c.	4	2	6
Theatres	1	1	0
Markets	0	2	3
Total	1,259	1,826	841

Auctioneers.—There are 54 Auctioneers in New York, by whom alone (or their partners or clerks) all sales by auction in the city must be made, under penalty.

IV.—COMMERCE.

The arrivals from foreign ports at the port of New York were, in—

	1835.	1836.
American vessels . . .	1,565	1,583
English „ „ . . .	287	366
Other nations . . .	192	344
Total . . .	<u>2,044</u>	<u>2,293</u>

The coasting arrivals are between 4,000 and 5,000 per annum.

The number of passengers that arrived at New York from foreign countries, in the six years 1831-36, was 266,494; or, on the average, 44,415 per annum. In the year 1836 they amounted to 60,540; and the number is stated to have increased greatly in the season of 1837, the average being nearly 2,000 per week.

In 1791, the Exports from New York to foreign ports, amounted to 563,730*l*. In the year ended the 1st of October 1835, they were as follows:—

<i>Domestic Produce.</i> —In American vessels . . .	£4,303,465	
In foreign „ „ . . .	<u>580,805</u>	4,884,270
<i>Foreign Produce.</i> —In American vessels . . .	£1,481,620	
In foreign „ „ . . .	<u>461,794</u>	1,943,414
		<u>£6,827,684</u>

The value of the Imports in the same year was—

In American vessels . . .	£18,626,278
In foreign „ „ . . .	<u>1,216,765</u>
	<u>£19,843,043</u>

In 1832, the customs' revenue on imports into New York amounted to 2,925,000*l*., while the total customs' revenue of the United States has seldom exceeded 4,950,000*l*. In 1834, the total tonnage of New York, registered, enrolled, and licensed, was 359,222 tons, or upwards of one-fifth of the whole tonnage of the United States. The number of vessels in port, in the busy season of the year, varies from 600 to 700, exclusive of above 50 steamers.

The northern and western canals were not completed till about ten or eleven years ago. Some years elapsed before the navigation of them was well understood, and properly appreciated and encouraged. Now 40,000 boats arrive and clear in one year, at the Hudson river.

Packets.—The regular Packets from New York to foreign ports, are—

To Liverpool, 5 times in each month . . .	20	Packets.
London 3 „ „ . . .	12	„
Havre 4 „ „ . . .	15	„
Liverpool and Belfast	4	„
Greenock	3	„
Carthagena, Havannah, and Vera Cruz . . .	5	„
Total	<u>59</u>	

There are 11 principal lines of packets between New York and the southern ports of the United States, and 28 other lines to the South and East; 25 transportation lines of boats on the Erie Canal, and 9 lines of tow-boats on the Hudson River. There are also 22 steam-boat ferries in New York.

Railways.—The Railways connected with the city of New York are—

1. The *New York and Harlaem*, 6 miles in length, incorporated in 1831, with a capital of 135,000*l.*, and now in operation.

2. The *New York and Albany*, incorporated in 1832, with a capital of 675,000*l.* This line forms a continuation of the New York and Harlaem Railway to the Hudson River, opposite Albany, a distance of upwards of 150 miles. For 125 miles from New York there cannot be a more favourable route for a railroad in this State. In the first 90 miles the elevation is only 496 feet, and about 30 miles of this section is a dead level, lying due east of the almost inaccessible highlands of the Hudson. There is to be a tunnel, of about one-third of a mile long, through the Hillsdale ridge, or an inclined plane on each side. The estimated cost of the railway, for a single track, is 2,700*l.* per mile. This line when completed will connect, at Albany, with the grand chain of railways now in progress or contemplated from Albany to Buffalo, and by this route the distance from New York to Lake Erie will not exceed that by the following proposed line.

3. *New York and Erie Railway*, incorporated in 1832, with a capital of 2½ millions sterling, and a State loan of the same amount—total 4½ millions. This great work is intended to run from Tappan, on the west bank of the Hudson, to Dunkirk, on Lake Erie; and its effects on the population, agriculture, and manufactures, of the extensive district through which it passes, will not be inferior, probably, to those of the great Erie Canal. Considerable progress is already made in this work, particularly from the two extremities, and, when completed, it is anticipated that it will have running on it from 12,000 to 15,000 cars, and 150 locomotives. It is to communicate with the Hudson by a pier extending to the main channel of the river, and accessible at all times for vessels of any size. As a proof of the spirit with which this mode of communication is encouraged in America, it may be mentioned, that besides the support granted by the State loan, donations of great value have been made to this company by individuals owning lands on the route of the railway. These donations consist of many thousand acres of land; for instance, 50,000 in one county only, proffered by the proprietors for the purpose of inspiring confidence in the stock, providing for dividends and the payment of interest, and to secure the speedy construction of the road. How different this is from the practice in this country it is unnecessary to remark.

Waterworks.—In 1834 an Act passed the State Legislature for supplying the city with pure water, and great progress has subsequently been made in the requisite works: these are of surprising magnitude and boldness, and much less known than they deserve to be. The design is to bring all the water of the Croton River from a distance of 40 miles, a quantity calculated to give a sufficient supply for a population of 1,000,000. The works comprise very heavy excavations in earth and rock, numerous tunnels, embankments, culverts, bridges, and a line

of aqueduct throughout the whole distance. The land required for 33 miles of the aqueduct (the portion under contract) is 292 acres, belonging to 154 owners, and the average cost about 130*l.* per acre, including all damage. The aqueduct will be carried over the Harlem River by means of an inverted syphon, or cast-iron conduits of 3 feet diameter, supported on an arch of 80 feet span, at a level of 50 feet above the river. Four pipes of this size are calculated to deliver about 50,000,000 gallons of water every 24 hours, which is nearly the average quantity running in the Croton River. It is intended to lay down only two of these pipes at present, they being deemed more than sufficient to convey water to the city for many years to come. The water will be carried in the same manner over the Manhattan Valley, where an aqueduct bridge of upwards of 100 feet in height would otherwise be required. The iron pipes are estimated at 4,000 to 5,000 tons' weight, and circulars have been sent to the iron-founders of Great Britain inviting tenders. The total cost of the works is now estimated at 1,912,500*l.*, the original sum authorized by the Act being only 562,500*l.* The expenditure to 30th June 1838, amounted to 220,000*l.* The works are under the superintendence of John B. Jervis, Esq., the chief engineer, with a salary of 1,125*l.* per annum, with a staff of 15 assistants (salaries 160*l.* to 400*l.*), 10 inspectors at 160*l.* per annum, and subordinates. There appears to be a lively competition for the execution of the work, as for some of the sections more than thirty tenders were received from respectable parties. The time allowed for the completion of the aqueduct is five years, but the Commissioners very properly remark, that "a work of this magnitude and importance, which is intended to last for ages, must not have its permanence and safety jeopardized by a too rapid execution of its parts; and it is therefore necessary, in order that the operations should progress moderately but steadily, that the whole work should be moving onwards to completion at one and the same time."

Fuel.—From the City Inspector's Report it appears, that in the year 1836 there were weighed, measured, and inspected, for consumption in New York,—

	Quantities.	Average Value.	Value.
		<i>s.</i> <i>d.</i>	<i>£.</i>
Of Nut, Oak, and Pine-Wood	267,998 Loads	11 7 per Load	155,554
Of Anthracite Coal	15,858 Tons	41 10 per Ton	33,160
Of Virginia Coal	6,453 Chaldrons	40 0 per Chaldron	12,838
Of Charcoal	291,886 Tubs	1 9 per Tub	25,248
Total			<u>£226,850</u>

Auctions.—The amount of sales of merchandise, &c. by auction, in New York, during the year ended 30th Sept. 1836, was:—

Not subject to Duty	£. 7,719,195}	Total Sales . £11,788,967.
Subject to Duty	4,069,772}	

The amount of Duties received was . . . £57,732.

By the census of 1835, there were in the city of New York:—

Grist-Mills	2	Rope-Walks	10
Saw-Mills	6	Paper-Mill	1
Cotton Factories	5	Tanneries	5
Woollen Factory	1	Breweries	10
Iron Works	15		
Distilleries	9	Total	68
Glass Factories	4		

Improved Acres of Land	4,482
Neat Cattle	4,055
Horses	10,683
Sheep	416
Hogs	11,903

Number of Yards of Linen, Cotton, or thin Cloths } manufactured in Families	868,500
Raw materials valued at	£ 400,188
Manufactured Articles	627,378

Insurance Companies.—The chief of these is the New York Life Insurance and Trust Company, established in 1831. Its main features are —

Capital loaned on Bond or Mortgage	£ 225,000
Deposits in Trust at Interest	948,125
Trusts of Accumulation at Interest	75,344
Amount for which the Company is responsible in case of Death	462,766

Number of lives insured on 1st Jan. 1837, 615. The whole number of lives insured has been 1211.

The company have declared twelve half-yearly dividends on their capital stock since Jan. 1832, averaging for the six years $8\frac{3}{4}$ per cent. per annum.

There are fifteen Marine Insurance Companies, nine of them established since 1830; the oldest in 1798. Total capital, 1,271,250*l*.

There are twenty Fire Insurance Companies, all but three of them incorporated in 1836; the oldest in 1833. Total capital, 1,260,000*l*.

Seven Insurance Companies lost their capitals, amounting to 663,750*l*., by the great fire of 16th Dec. 1835, and have been discontinued, receivers having been appointed.

Banks.—On 1st Jan. 1837, there were twenty-four Banks in the city of New York, with a total capital of 4,693,770*l*. Of these eighteen were, and six were not, subject to the safety fund.

Ten of the banks are situated in *Wall Street*, which is consequently the great resort of commercial men. The oldest of them is "The Bank of New York," established in 1791. Of the others, one was established in 1799; twelve between 1805 and 1825; and ten between 1829 and 1836 inclusive. They are all joint-stock banks, the shares varying from 5*l*. 12*s*. 6*d*. to 112*l*. 10*s*.

The banks are open from 10 A.M. to 3 P.M. Bills offered for discount must be inclosed in a letter to the cashier the day before discount day. The rate of discount is six per cent. per annum (reckoning 360 days to the year), excepting for notes having over sixty-three days to run, when some of the banks have the privilege of charging seven per cent.

By an Act of the Legislature passed 31st March 1835, bank-notes for less than five dollars (22*s*. 6*d*.), or for any sum between five and ten

dollars, are prohibited, under penalty of five times the nominal value of the notes, and costs.

General State of New York Banks, 1st Jan. 1837.

	18 Banks subject to Safety Fund Law.	6 Banks not sub- ject to S. F.	Total.
Capital	£ 3,737,520	£ 956,250 *	£ 4,693,770
Circulation	1,835,073	345,886	2,180,959
Individual Deposits	2,515,570	826,814	3,342,384
Specie	867,252	197,322	1,064,574
Loans and Discounts	8,199,553	2,205,826	10,405,379
Dividends in 1836	349,197	..	..
Surplus, or Profits in hand	648,806	83,420	732,226

Savings' Banks.—There are four in the city of New York; their total funds on 1st Jan. 1837, amounted to 932,430*l*.

The chief of these is the "New York Bank for Savings," incorporated 26th March 1819. The bank has consequently been in operation 17½ years (to Dec. 1836), during which time it has opened

55,132 Accounts, and received altogether from Depositors	£ 2,938,431
To which add interest to 1st Jan. 1837	301,314

	£ 3,239,745
Deduct 28,705 Accounts closed, and paid out	2,444,659
Leaving 26,427 Accounts, entitled to the sum of	£ 795,086

which will average less than (133*s*) 30*l*. to each account, thereby demonstrating that the design of the legislature in chartering this charitable institution has been fully accomplished, by extending to the poor and labouring classes, the benefit of keeping and employing their little earnings for their security and advantage.

Post-Office.—The Post-office in the city of New York is situated in the Rotunda, City Hall Place. It is open for the delivery of letters every day (except Sunday) from 8 A.M. to 7 P.M. On Sundays, from 9 to 10 A.M., and from half-past 12 to half-past 1 P.M. The vast business of this office since its recent organization is conducted upon a regular system, which defines the duties and responsibilities of every person employed in it. There are four general divisions of the office, denominated,

1. *The City Delivery.*—One superintendent and seven clerks, who have charge of all the letters for the boxes, general delivery, and packets.

2. *Forwarding Department.*—One superintendent and six clerks, whose duty it is to mark and stamp, distribute, and mail all letters for other offices.

3. *Newspaper Distribution and Delivery.* } Under charge of super-

4. *Letter Carriers' Department.* } intendents, who deliver letters and papers to all persons whose residences are known (and have not boxes) twice a day, between March and September.

The amount of postage received at the New York office for the year ending 31st March 1835, was 45,697*l*.; but this amount gives us no adequate idea of the extent of the business of this office, without taking into account the very low rates of postage as compared with those to which we are accustomed. The following are the New York rates:—

* Including the capital of one bank (112,500*l*.), which is not included in the report as to other particulars.

On single letters (or one piece of paper) not exceeding 30 miles,	3½d.
„ „ „ between 30 and under 80	5½
„ „ „ „ 80 „ 150	6¾
„ „ „ „ 150 „ 400	10
„ „ „ „ above 400	13½

Newspapers are charged from ½d. to ¾d. according as the distance falls short of, or exceeds, 100 miles.

Periodical magazines from ¾d. to 1½d. per sheet of sixteen 8vo. pages, or eight pages 4to., as the distance exceeds 100 miles or not.

Other pamphlets from 2d. to 3d. per sheet.

Distances on Sundry Post Routes.

From New York to Buffalo (via Albany and Utica)	445 Miles.
„ „ Ditto (via Morristown, Oswego, and Ithaca)	356 „
„ „ East Hampton, Long Island	122 „
„ „ Whitehall, on Lake Champlain	223 „
„ „ Ogdensburgh, on the St. Lawrence	355 „
„ „ Montreal	375 „

V.—EDUCATIONAL, RELIGIOUS, AND LITERARY.

Newspapers.—The number of Newspapers published in New York is 62; viz., 14 daily; 12 tri-weekly and semi-weekly; 32 weekly, and 4 others.

Schools.—The Public School Society, incorporated in 1805, had under its care on 1st May 1837,—

In 15 Public Schools and Primary Departments	Scholars.
28 Primary Schools	9,505
6 Public and Primary Schools for Coloured Children	3,291
	1,276
In 49 Schools.	Total . . 14,072

These schools are judiciously distributed throughout the city, and evening schools are held for children who cannot attend during the day. The sum of 19,700*l.* was expended out of the city funds for payment of teachers, and other general expenses of the institution during the year to 1st May 1837.

The trustees express their gratification at the flourishing condition of the several departments, but regret the unconcern and indifference of many parents, which prevent the extension of the benefits of education to all the children of their populous city. The trustees report that, during the preceding year —

Children 2401 have been promoted from }
the Reading Classes to } Writing on Paper.

„ 4,504	„	Addition and Subtraction.
„ 2,945	„	Multiplication and Division.
„ 1,502	„	Compounds of first Four Rules.
„ 1,070	„	Reduction.
„ 818	„	Rule of Three.
„ 650	„	Practice.
„ 978	„	Interest, &c.

Of the 6867 children in the public, as distinguished from the primary schools and primary departments, there are now —

Children 2780 learning Geography.	Children 1003 learning Astronomy.
„ 1485 „ Grammar.	„ 179 „ Algebra.
„ 96 „ Book-keeping.	„ 42 „ Geometry.
„ 278 „ History.	„ 11 „ Trigonometry.

An Infant School Society was instituted in May 1827, under the patronage of the late Governor Clinton, and opened its first school in July of the same year. This serves as a model-school, or seminary where teachers are trained and qualified for superintending other schools. The annual subscription is 4*s.* 6*d.*, and a life subscription 3*l.* 7*s.* 6*d.*

The New York Episcopal Sunday-School Society has 17 schools in union with it, containing upwards of 4000 scholars.

There are also in New York,—

	Scholars.
In the Roman Catholic Schools and Orphan Asylums . . .	1553
„ Mechanics' School (Males, 294; Females, 210) . . .	504
„ Orphan Asylum Society (instituted 1806) . . .	178
„ Deaf and Dumb Institution	150
„ Institution for the Blind	64

The principal private schools are 52 in number; 23 for males, and 29 for females.

New York University and Colleges.—The University of the city of New York is situated in Washington Square. It is built of marble, and is a specimen of the English collegiate style, 100 feet wide, and 180 feet long. The front is divided into five parts, the chapel being in the centre, with wings and flanked towers on either side. The chapel is 55 feet wide, and 85 feet deep, and somewhat similar to that of King's College, Cambridge. It has octangular turrets at the four corners, and the two ends are gabled and crowned (as well as the sides) with an embattled parapet. The west window (under which is the entrance through a richly moulded and deeply recessed portal) is 24 feet wide, and 50 feet in height.

The university was chartered in 1831, and opened for students in 1832. When completed, it will form one of the most splendid ornaments of the city.

It is governed by a council, with presidents, vice-presidents, &c.; and the officers include a chancellor and sixteen professors of literature and science. The plan of the institution comprises instruction in the whole range of general science, and of the useful and liberal arts; and the scheme of study is so arranged as to enable every student to attend to as many branches as his time and powers will permit.

The university course includes a period of four years for the degree of B.A. The Scriptures are read, and prayer offered every morning in the chapel, when one of the faculty officiates, and all the students are required to be present. The price of tuition is 1*l.* per annum to students, who pursue the whole course. For particular branches, students pay 4*l.* 10*s.* per annum for each. Students whose parents reside in the city are supposed to live in their own families. For others, boarding is provided in respectable families at a charge of 9*s.* to 22*s.* 6*d.* per week, according to circumstances.

The Regents of the University (of whom Washington Irving is one) are twenty-one in number, including the Governor and Lieut.-Governor of the State for the time being. They are appointed and may be removed by the legislature. They meet annually, or oftener if necessary, in the capitol at Albany. They have the power of granting degrees in the arts and in medicine, and have the control of the whole income of the

Literature Fund, and divide it yearly in equal proportions in the eight senate districts of the State, amongst such of the incorporated seminaries of learning (exclusive of colleges) as are subject to their visitation. Such distribution is to be made in proportion to the number of students in each seminary, who, for four months during the preceding year, shall have pursued therein classical studies, or the higher branches of English education, or both. The regents are authorized personally, or by committee, to visit and inspect all the colleges and academies in the State, and make an annual report to the legislature of the system of education and discipline therein followed.

The General Theological Seminary of the Protestant Episcopal Church in the United States, is located in the city of New York. It commenced operations in 1819. The number of students is about 90. The library consists of 4,000 vols. It is under the presidency of the Right Rev. Dr. Onderdonk, and six other professors.

Columbia College was formerly called King's College, having been established under a royal charter in 1754, which has been since confirmed by several Acts of the Legislature since the revolution. It is under the presidency of Dr. W. Duer, and ten other professors, among whom is Professor Anthon, well known in this country from his editions of some of the classics. The number of graduates since the establishment of the college to the end of 1836, has been about 1700. There are now about 100 in college. There are two literary societies connected with the college, and also a grammar-school, which is under the direction of Professor Anthon, as Rector. The number of scholars is nearly 300, and instruction is given in all branches requisite for college or for the counting-house. There is also a primary school attached to this institution, in which boys from five to ten years of age are prepared for the more advanced classes.

The importance of general education to the stability of a free government is strongly recognized by the authorities of New York. In the mayor's annual message of 22nd May 1837, that officer states, that "the colleges, academies, and private seminaries, are in a flourishing condition."

Churches and Chapels in the City of New York.

Presbyterian	37	Universalist	3
Episcopalian	28	Unitarian	3
Baptist	20	Independent	2
Methodists, Episcopal	12	Jews	3
, Independent	8	Moravian	1
Reformed Dutch	15	Miscellaneous	2
Roman Catholic	6		
Friends	4		
Lutherans	2		
		Total	146

The Literary and Scientific Institutions of New York are—

1. *The New York Library Society*.—Established 1754. Open every day (except Sundays and holidays), from 10 A. M. to 3 P. M. Number of Volumes, 30,000. Price of Shares, £6. 12s. 6d. Annual Subscription, 18s.

2. *The New York Literary and Philosophical Society*.

3. *The New York Historical Society*.—Established 1809. This Society possesses a library of about 10,000 volumes, with a valuable collection of coins and medals.

4. *The New York Athenæum*.—Established 1824. For the promotion of Science and Literature.

5. *The American Lyceum*.—Founded in 1831. For the promotion of education, particularly by common schools. One of its leading objects is to establish Lyceums (or associations for mutual intellectual improvement) in towns and counties, and through such channels to receive and transmit useful knowledge on all subjects important to the people of the United States generally. The annual meetings in May are attended by delegates from literary associations and friends of knowledge of different States. The exercises consist of essays and memoirs, furnished by writers appointed, or volunteers; debates on appropriate topics, &c. The proceedings are published in an official journal, "The Annals of Education." Measures have been recently taken to embrace within the range of the society so much of Natural Science and the Fine Arts as is appropriate to its general objects. The association is under the presidency of W. A. Duer. There is a large executive committee, and a number of corresponding secretaries in different States.

6. *The Lyceum of Natural History*.—Established 1818. Possesses a valuable library and museum of natural history.

7. *The New York Lyceum*.—Instituted in 1834. For the diffusion of knowledge by popular lectures. A reading-room, library, museum, &c. The Association have erected a splendid granite building, 75 feet by 100 feet, in Broadway.

8. *Apprentices' Library*.—Established in 1820, by the General Society of Mechanics and Tradesmen. 1,535 apprentices read books from the library, which consists of about 12,000 volumes.

9. *American Academy of Fine Arts*.—Established 1808.

10. *National Academy of Design*.—Established 1806.

11. *Clinton Hall Association*.—Established 1830.

12. *Mercantile Library Association*.—Instituted 1821. For the encouragement of moral and intellectual improvement, particularly among merchants' clerks. The library (Jan. 1838) consists of nearly 16,000 volumes, having received an addition of 2,547 in the past year, 2,166 by purchase, and 381 by donation. The average number of volumes drawn daily from the library is about 450, or upwards of 135,000 volumes annually. Of this large number a great proportion is found to consist of works upon the solid branches of learning, as the physical sciences, political economy, commerce and the Arts.

The reading-rooms contain the chief periodicals of the United States, Great Britain, and France. The rooms are open from 10 A. M. to 10 P. M. Annual courses of lectures are delivered under the patronage of the Directors. The number of members, subscribers, and stockholders on 1st January, 1838, was 3,772; of these there are 344 who pay 9s. per annum, 50 who pay 22s. 6d., and 278 stockholders.

The receipts of the last year were 1,557*l.*, of which 150*l.* were received from lectures. The expenditure was 1,530*l.*, thus appropriated: books and periodicals, 632*l.*; binding, 42*l.*; gas-lights, 108*l.*; cata-

logues, 210*l.*; salaries of librarian, assistant, and keeper, 388*l.*; sundries, 150*l.* The only debt of the Association is a sum of 85*l.*, on account of the Catalogue. There are two scholarships in Columbia College, one of the oldest and most respectable institutions of the country, connected with this Association. Their Annual Report possesses considerable interest.

13. *New York Law Institute*.—Established 1828, by Members of the Bar, for the purpose of professional improvement. In 1830 an Act of Incorporation was obtained. The library contains more than 2,500 volumes of select Law Works, and nearly the whole series of English and American Reports. The shares of this institute are 22*l.* 10*s.* each. Every member paying 4*l.* 10*s.* on admission, and 2*l.* 5*s.* annually for eight years afterwards, becomes a shareholder. Members of the Bar from abroad, while in the city, and the Judges of the different Courts, are entitled to the use of the library.

14. *New York Sacred Music Society*.—Established 1823. Meet at their Hall every Monday evening.

15. *New York Protestant Episcopal Church Music Society*.—Established 1835. For the cultivation of music as exclusively applied to sacred purposes.

Other Societies connected with Commerce and the Arts, are—

1. *The Chamber of Commerce*.

2. *General Society of Mechanics and Tradesmen*.

3. *American Institute of the City of New York*.—Incorporated May, 1829. For the promotion of domestic industry in agriculture, commerce, manufactures and the Arts, and for encouraging improvements by the bestowal of rewards, &c.

The Institute is composed of four departments, as above. An Annual Manufacturers' Fair is held under the auspices of the Institute. The *Statistical Library*, established in 1833, contains above 4,000 volumes. A Repository is formed for models and specimens of American productions; and for the furtherance of its object, a periodical, entitled "The Journal of the American Institute," is published monthly, at 1*s.* per annum, and has already a wide circulation.

4. *New York Board of Trade*.—To promote just and equitable principles in trade, to correct abuses, and generally to protect the rights, and advance the interests of, the mercantile classes.

5. *New York State Agricultural Society*.

6. *New York Horticultural Society*.

7. *Merchants' Exchange Company*.—Capital, 225,000*l.*

8. *New York Typographical Society*.—Instituted 1807. Incorporated 1817. Library 1,000 volumes.

9. *New York Typographical Association*.

10. *Mechanics' Institute*.—Established in 1831. This Institution holds an *Annual Fair* for the exhibition of models, machines, &c. which continues for about nine days. In 1837 the receipts from the Fair were 720*l.*; expenses, 653*l.*; profit, 67*l.* There is also a library connected with the Institute of upwards of 1,300 volumes. A course of lectures is delivered every winter, besides which there is a scientific lecture every Tuesday, chiefly by members. The reading-room is

supplied with most of the foreign and American periodicals, and the daily papers. The subscription is 9s. per annum, with an entrance fee of the same amount. The number of members is about 1,200.

VI.—BENEVOLENT INSTITUTIONS.

These are very numerous in New York, besides those of a charitable kind coming under the head of Medical Institutions. The list comprises the following societies:—For Religious Education, 7; Home and Foreign Missions, 11; Sunday Schools, 6; Bible and Tract, 13; Church Building 1; Hebrew Benevolent, 4; Widows and Orphans, 6; Seamen's, 4; Blind and Deaf and Dumb, 2; State Colonization, 1; Slave Emancipation, 2; Domestic Servants, 1; Reformation of Juvenile Delinquents, 1; Temperance, 1; General Benevolence, 8;—total, 68.

In his message to the Common Council of 22nd May 1837, the Mayor states that “of all the charities of the city, there is perhaps none more attractive, or which more fully attests the wisdom and benevolence of its founders, than the institution known as the *Long Island Farms*.” These schools contain 371 destitute boys and 141 girls; and at this place and Bellevue 189 infants. The schools are ably conducted; proper nurses and good clothing are provided for the children, and they are considered in every respect as the “children of the public.” At a proper age they are bound out to suitable trades or occupations, with provisions for their good treatment, maintenance, and instruction. The Long Island Farms were purchased in 1830, and, together with the improvements thereon, have cost the city about 13,000*l*. They are situated on the banks of the East River, and contain about 230 acres of land, two-thirds of which is under cultivation.

The *Society for the Reformation of Juvenile Delinquents* has laboured for many years with great assiduity and success in their benevolent purposes. In 1837 the Society received into its House of Refuge 188 new inmates, viz., boys, 129; girls, 59; between 7 and 17 years of age. Their parentage was as follows:—American, 59; Irish, 53; English, 26; Scotch, 5; African, or coloured, 32; German, 9; French, 2; Portuguese, 2;—total, 188. So that the British islands had the unenviable distinction of furnishing nearly one-half of the whole number of offenders.

The *New York Institution for the Blind* was chartered by the Legislature in 1831, and commenced operations the following year. On 1st February 1838, it contained 64 pupils (38 males and 26 females), being the total number for which provision is made under the State Law. There are nearly 1,000 blind persons in the State. The Institution possesses a commodious building, and several lots of land, the gift of a citizen of New York. The donation of 5*l*. 12*s*. 6*d*. constitutes a life member. The annual expenditure is about 2,900*l*.

The instruction of the pupils is arranged into three departments—intellectual, mechanical, and musical. The literary instruction comprises reading, writing, grammar, geography, arithmetic, and history. Lectures are also given on other subjects, and the committee state that the instruction afforded is so thorough and complete, “that there could scarcely be found in any school in the State an equal number of pupils,

who, though possessed of sight, would be able, upon a fair examination on the same subjects, to compete with the blind boys and girls."

The mechanical part produces something towards the expenses of the Institution, and is the means of instructing the labourers and learners in branches of industry, which enable them to provide for themselves in after life.

The musical department mingles utility with pleasure, and has been most successfully cultivated. The committee have very properly considered that a thorough acquaintance with this delightful art forms a *capital* which the pupils can turn to profitable employment. A band is composed of some of the older boys, and a choir of such of the pupils, male and female, as possess good voices. As a proof of the proficiency to which the blind may attain in this department, it is stated that five public concerts were given by them in 1837, which produced a net profit of about 100*l*. Their instruments consist of 3 pianos, 10 clarionets, 5 flutes, 2 trombones, 4 horns, 1 trumpet, 2 guitars, 1 bass drum, and a pair of cymbals.

The New York Institution for the Deaf and Dumb, established in 1818, is chiefly supported out of the public funds, but private nominees are also admitted and provided for, in all respects, except clothing, at the rate of 29*l*. 5*s*. per annum. For clothing there is an additional charge of 6*l*. 15*s*. The children are admitted at ten years of age, and they must leave at fifteen, unless supported by other than public bounty. The period of admission (except under special circumstances) is from 15th August to 1st October in each year.

In the year 1837, 24 pupils were admitted and 34 discharged, leaving 150 in the Institution. The receipts were 6,270*l*.; the expenditure, 6,045*l*.

The Board of Visitors represent this Institution as admirably managed, and as "one of the best seminaries of the kind in the world." Morning and evening prayers are daily attended in the chapel, and the prayer is preceded by the reading and exposition of a passage of scripture, all in the language of signs. In addition to the exercises of the school-room, regular courses of Lectures are given on stated evenings to the whole school assembled in the chapel, upon select portions of the following subjects:—

1. The Political, Civil, and Social Relations of Man.
2. Universal History.
3. Chemistry, Natural Philosophy, and Astronomy.
4. Universal Geography.
5. Natural History.
6. The Origin, Progress, and Present State of the Arts.
7. Biography.
8. Book-keeping.

The results of this experiment, which originated with this Institution, are stated to be such as not only to warrant the continuance of the practice, but to render it highly desirable.

Mechanical instruction forms an important part of the system. The pupils being either poor children, or from families in moderate circumstances, have their choice of five occupations. The male pupils are thus engaged from 3 to 4½ hours daily, while plain sewing is taught to all the females, and dress-making and tailoring to such as desire to learn these branches.

In December 1837, the number of pupils learning—

Shoe-making, was . . .	17 males	. 0 females
Cabinet-making . . .	5 „	. 0 „
Tailoring . . .	23 „	. 12 „
Book-binding . . .	20 „	. 8 „
Gardening . . .	3 „	. 0 „

The visitors say that the workshops resound with the hum of cheerful industry, and the pupils seem pleased with their employments.

VII.—MEDICAL INSTITUTIONS.

These are 16 in number :—

1. *The College of Physicians and Surgeons*.—Under the management of a president, vice-president, and seven professors. Lectures commence on the first Monday of November annually, and continue four months. Degrees are conferred by the Regents of the University at the recommendation of the Board of Trustees.

This Institution has for several years been in a very flourishing state. The entire expense to the students for all the courses is about 25*l*. The number of students in 1836, was 106.

2. *Medical Society of the State of New York*.—Is “located” in the city, but belongs to the whole State.

3. *New York State Vaccine Institution*.—Formed by the State Medical Society, February, 1832.

4. *Medical Society of the City and County of New York*.

5. *Society of Surgeon Dentists of the City and County*.

6. *College of Pharmacy*.

7. *Quarantine Hospital, Staten Island*.—Established by State Act, April 1820.

8. *Eye Infirmary*.—Founded in 1820.

9. *City Eye and Ear Infirmary*.—Broadway.

10. *Infirmary for Diseases of the Skin*.

11. *New York Hospital*.

Physicians, attending, 4; Consulting, 1; House, 2.

Surgeons, „ 6; „ 1; „ 4.

Patients, 31st December, 1836 . . . 213

Admitted in 1837 1,769

Total . . . 1,982

Of whom were cured, 1,305; relieved, 140; discharged at their own request, 121; disorderly, &c., 39; died, 191; remaining in house, 186.

The receipts in 1837 were 8,222*l*.; the expenditure, 8,732*l*.

Of the 1,982 patients treated in 1837, there were—

Natives of the United States	791
„ British and Spanish America	31
„ Ireland	578
„ England	181
„ Scotland	61
„ Wales	22
„ Other European States	842
„ Africa	272
„ The East Indies	8
„ The West Indies	6
„	32
Total	1,982

During the 36 years to 31st December 1832, 47,744 patients were admitted into the New York Hospital, whose nativity is recorded as follows. The Table is interesting, as shewing the tendency of emigration from different parts of the Old World into the New, up to the period to which the Table extends.

Natives of the United States	25,727	or	53·9	per cent.
„ England	3,645			
„ Wales	111			
„ Scotland	1,271			
„ Ireland	11,524			
	<hr/>			
„ The West Indies	713	„	34·7	„
„ Nova Scotia	28	„	1·5	„
„ The Ocean	47	„	0·2	„
„ Africa	260	„	0·5	„
„ The East Indies	190	„	0·4	„
„ Germany	1,025			
„ Holland	345			
„ Prussia	230			
	<hr/>			
„ Denmark	260			
„ Norway	200			
„ Finland, 5; Sweden, 708 =	713			
	<hr/>			
„ Russia, 65; Poland, 13 =	78	„	2·4	„
„ France, 724; Switzerland, 20 =	744	„	0·2	„
„ Italy, 204; Sicily, 20 . . =	224	„	1·6	„
„ Spain, 155; Portugal, 254 . =	409	„	0·5	„
	<hr/>			
„ Spain, 155; Portugal, 254 . =	409	„	0·8	„
	<hr/>			
Total	47,744		100·	

12. *Lunatic Asylum at Bloomingdale*, connected with the New York Hospital.

	Males.	Females.	Total.
Patients in Asylum, 31st December, 1836	88	54	142
„ Admitted in 1837	72	40	112
	<hr/>	<hr/>	<hr/>
Total	160	94	254

of whom were—

Cured	50		
Relieved	12		
Discharged on request	32		
Died	13		
Eloped	2		
	<hr/>		
— viz.,	73	36	109
	<hr/>	<hr/>	<hr/>
Remained, 31st December, 1837	87	58	145

The receipts in 1837 were about 9,500*l.*; the expenditure, 10,600*l.*; shewing an excess of 1,100*l.* expenditure.

13. *Bellevue Hospital*—Established November 1826.—For the sick and insane Poor. This establishment is a branch of the City Almshouse, and its expenses are included in those of that establishment.

The total number of cases treated in 1836 were 1,209; of whom were cured, 700; relieved, 50; discharged at their own request, 39; disorderly or improper cases, 22; eloped, 16; died, 296; remaining, 87.

Of the 1,209 patients, 502, or 42 per cent. were received into the *Insane Department*; viz., men, 308; women, 194.

Of these were—

Natives of the United States	208	or 41.4 per cent.
Foreigners	294	„ 48.6 „
Total	502	100.
Discharged	282	
Died	74	
	356	
Remaining, 1st January, 1837	146	
Total	502	

The great difference in the social condition of native Americans and of the emigrants, particularly Irish, who flock to New York, is distinctly shewn by the following statement of the birth-places of the patients admitted to this hospital in 1836:—

Americans	227
Irish	741
English and Welch	122
Scotch	22
	885
Germans	51
Other Europeans	31
	82
Mexicans, West Indians, & Nova Scotians	15
Total	1,209

14. *New York Dispensary*.—Established 1790, for relieving sick poor persons, without any distinction or exception whatever.

Attached to this institution there are 10 attending physicians, 1 assistant, and 1 vaccine physician, and 6 consulting physicians and surgeons. Patients attended and supplied with medicine in 1837, 17,149; viz.—males, 6,328; females, 8,890; vaccine patients, 1,931.

The expenses are about 550*l.* per annum. The number of life members (with John Jacob Astor at their head) is only 18, and of annual subscribers less than 150. The physicians receive a small salary.

15. *Northern Dispensary*.—Founded in 1827. Attending physicians, 6; consulting physicians and surgeons, 6.

Patients attended in the year ended 1st April 1837, males, 1,197; females, 1,921;—total, 3,118. The receipts were about 285*l.*; the expenses 247*l.* The attendance of the medical men is given gratuitously.

16. *Eastern Dispensary*.—Established in 1834. District physicians, 6; consulting physicians and surgeons, 4; eye and ear department, 2; vaccine department, 1.

Patients attended in 1836, males, 2,340; females, 3,552; (out-door, 3,817; in-door, 2,075;) vaccinated, 428; eye and ear department, 294;—total, 6,614. The expenses of the year ended 19th January 1837, were about 310*l.* The total number of patients attended in the two years and a half from its establishment is 17,573.

The physicians of this institution receive the moderate allowance of 1*l.* 5*s.* per annum, with the exception of those who attend to the eye and ear department, who receive nothing.

Of the total number of patients relieved by the Northern and Eastern Dispensaries, as above stated, it appears that there were—

Born in the State of New York	3,701	or	38	per cent.
„ Other parts of the United States	884	„	9	„
„ Ireland	3,411	„	35	„
„ Great Britain and other foreign countries	1,736	„	18	„
Total	9,732		100	

VIII.—LAW, &c.

Besides the district and circuit courts, whose jurisdiction extends throughout the State, there are in the city of New York the following courts:—

1. *The Superior Court.*—With a chief, and two other justices, each receiving a salary of 560*l.* per annum. The regular terms of this court are the first Monday of each month.

2. *The Court of Common Pleas.*—With two judges, besides the mayor, recorder, and aldermen, who are *ex officio* judges. The court sits for the trial of issues on the third Monday of every month, except August. Term continues four weeks.

3. *Courts of General and Special Sessions.*—Held by the recorder and two aldermen. Meet on the first Monday in every month, and may continue until Saturday of the third week thereafter.

4. *Marine Court.*—Held by three justices.

5. *Justices Courts.*—Seven in number, for the several districts of the city.

6. *Police Court.*—Established in 1798. Five magistrates; one of whom receives the watch every morning at daybreak, this duty being performed weekly by each magistrate alternately. The office hours are from 9 o'clock A.M., until sunset; hour of relief, 2 o'clock P.M.

There are some peculiarities in the practice of the legal profession in the United States which strike a person accustomed only to English usages. The different *degrees*, as they are called, of attorney, counsellor, solicitor, and counsellor in chancery, are generally held together by the same persons, and they are all denominated “gentlemen of the bar.” Every *attorney* of the Supreme Court is entitled to an examination as *counsellor* in three years after his admission as attorney; and every person is entitled to an examination as solicitor upon producing his attorney’s license, and as counsellor in chancery upon producing his counsellor’s license in the Supreme Court. Persons are admitted, as of course, to the same degrees in the County Courts, and in the Superior Court of the city of New York, as they hold in the Supreme Court.

The number of practising attorneys and counsellors in the city of New York is above 600, of whom 100 are commissioners of deeds, and 100 public notaries, these offices being limited in number.

The following is a copy of an Act recently passed by the State of New York, and perhaps furnishes the most striking instance of senatorial brevity which the records of legislation display:—

“*An Act to amend an Act, entitled, ‘An Act, suspending for a limited time certain provisions of law, and for other purposes,’ passed 16th May 1837.*”

“The people of the State of New York, represented in senate and assembly, do enact as follows:—

"The last clause of the first section of said Act, shall not be so construed as to apply to any debt due from one bank to another, and this Act shall take effect immediately."

The facts presented in the foregoing pages afford an ample illustration of the effects of free institutions, and the general diffusion of intelligence, whilst they exhibit one of the most remarkable instances of the rapid growth of a civic community which the history of the world can furnish. If the experience of the last twenty years may be taken as an indication of the future progress of the city of New York, its commercial greatness is yet far from having attained its acmé, and the sanguine anticipations of many of its citizens will no doubt prove justified by the result. What those anticipations are may be shewn by the following extract from one of the Reports of the Common Council,* with which I conclude this paper:—

"Look where we will we cannot find any city that promises to excel our own. It is the first hope of all who leave Europe, the preference of navigators, and decidedly the best resort for capitalists. It is the central city; the natural depôt for the reception and distribution of merchandise; the granary and store-house for a mighty continent, that is on the resistless march to wealth and pre-eminence.

"With a present population of nearly 300,000 souls (1836), steadily and rapidly increasing, a climate conducive to health, and possessing all the natural and artificial means to encourage the various branches of trade, it may confidently be anticipated, that within the next half century our city will contain a million of inhabitants, and control a commerce second only to that of the first city in the Old World."

On the Value of the Numerical Method as applied to Science, but especially to Physiology and Medicine. By WILLIAM AUGUSTUS GUY, M.B., Cantab. Professor of Forensic Medicine, King's College, London.

"MEDICINA est ars conjecturalis."—More than eighteen centuries have elapsed since this sentence was penned by the Roman writer; but time, though it has somewhat restricted its application, has scarcely impaired its truth. Within a comparatively recent period many branches of human knowledge, which were originally as conjectural as medicine itself, have attained to high degrees of certainty; and sciences, the creation as it were of yesterday, have grown to sudden completeness: but medicine, the oldest, and for a time at least the most advanced of all the branches of human knowledge, still remains a conjectural art. Is this conjectural nature of our art *necessary* or *accidental*? does it depend on difficulties inherent in the subjects of our study, or on certain defects in our methods of investigation? I know of no way in which this question can be better answered, and the peculiar difficulties which beset the study and the practice of our profession better illustrated, than

* Report of the Committee on Wharfs,

by comparing the means which we employ for the investigation of truth with others which may be resorted to for attaining the same end,—than by contrasting, in fact, the more perfect sciences with our own.

Of all the means of arriving at truth, the most simple, and at the same time the most certain, is abstract reasoning. It is true that *reason* must bear a part in all our investigations. Without her aid neither observation nor experiment could be directed to useful purposes, efficiently performed, or practically applied; but there is one class of subjects which forms, in a more especial manner, the province of abstract reasoning. I mean number—magnitude—quantity. For it is clear, that with regard to these we can lay down certain definitions which cannot be misunderstood, and make certain assertions which can neither be doubted nor denied. Who, for instance, can misunderstand the definition of a circle or a square, or doubt that the whole of any thing is greater than a part of it, or that things which are equal to the same thing are equal to one another? Now, reason, availing herself of these simple materials, a few plain definitions, and a few self-evident truths, and substituting, where it is practicable, signs for language, and symbols for expressions of quantity, (with a view of ensuring brevity, avoiding misconception, and furnishing expressions of greater generality than those employed in ordinary language,) has arrived at the most extraordinary results. Her first care, if I may so express myself, has been to procure instruments of calculation applicable alike to the most insignificant and to the most stupendous objects—alike to the atom, which from its minuteness escapes the cognizance of our senses, and to the world, which distance removes beyond the sphere of our vision; alike to the comparatively small masses, movements, distances, of the objects presenting themselves upon our earth, and to the vast masses, the enormous distances, the almost inconceivable velocities of the heavenly bodies. In procuring these instruments of calculation reason avails herself of no doubtful aid, neither of that of the senses, which indeed too often deceive us, nor of observation and experiment, which may fail, either from being badly directed or inefficiently performed; but, depending entirely on her own unaided powers, and possessing in them not merely instruments of discovery but tests of truth, the results at which she ultimately arrives are stamped with the seal of certainty.

It is in procuring these instruments of calculation that the work of unassisted reason may be said to terminate; but here begins that union of *reason* with *observation* and *experiment* which has reared the noblest monument, and achieved the proudest triumph of human intellect. It is to this application of the instruments of calculation to the materials furnished by observation and experiment, that we owe the so-called mixed mathematical or exact sciences. These sciences differ in their degree of certainty, some of them being scarcely less certain than the results of abstract reasoning itself, and others scarcely more perfect than the least-favoured sciences of observation and experiment. As a general rule, however, it may be stated, that their degree of certainty is exactly proportioned to the extent to which they admit of the application of numbers. This statement, the truth of which is borne out by all scientific experience, and broadly asserted by those who are best fitted to form a judgment concerning it, is well illustrated by the

science of astronomy. This is beyond all others a science of calculation; the relations of time, space, order, magnitude, and velocity (the great objects of its research), all admit of being expressed by numbers; the observations to which the astronomer applies his calculations are, strictly speaking, numerical; and even the beautiful theory of gravitation, by which the several detached facts were formed into a compact and perfect science, is a numerical theory. Hence it is that astronomy takes the lead among the applied sciences, and forms the model of a perfection which all of them strive to imitate. If time permitted, I might pass in review the several mixed mathematical sciences, and shew that they form a descending scale of perfection, whose degrees are marked by the extent to which they admit of the application of numbers. But I must not omit to mention one science, which, forming as it does a necessary part of the studies of every medical man, will afford a striking illustration of the position which I am endeavouring to maintain—I mean the science of chemistry. Not many years ago chemistry was a mere *art*, consisting of a great number of detached observations and experiments of the highest interest, and of the greatest practical importance, but still it did not deserve the name of a science. The application of a numerical theory—that of definite proportions—at once brought together the scattered members of which it consisted, and formed them, so to speak, into a living whole, on which were thus conferred the dignity of a science and the gift of prophecy. So great is the power which this numerical theory has given to the chemist, that one or two simple data, furnished by experiment, enable him to foretell the changes which will take place among the atoms of matter, with the same certainty with which the astronomer predicts the occurrence of an eclipse or the appearance of a comet.

If, then, calculation is capable of conferring such benefits upon science, why, it may be asked, has it not been more extensively employed? why has it not been applied alike to all the sciences of observation and experiment? The answer to this question is not difficult, and as it has an important bearing on our subject, I shall discuss it at some length.

The first attempt to employ calculation in aid of science was both the most obvious and the most successful which has yet been made. But little reflection was necessary to discover that as number itself is an abstract idea, entirely independent of the varying forms and properties of the things counted, so the most successful application which can be made of number is to those “primary existences and relations” which are themselves abstract, and which, even if matter had no existence, “we could not even conceive not to be.”* Such are space, time, order, &c. To these, which are in their very nature numerical, we may add certain relations of matter, such as relative position and distance. It was to these last that the *instruments of calculation* of which I have already spoken were first applied. As this term, *instrument of calculation*, has been more than once employed in a sense distinct from the mere use of numbers, I shall explain, by one or two examples, the meaning which it is intended to convey.

* Sir J. Herschel, “Discourse on the Study of Natural Philosophy,” p. 18.

The *angle*, for instance, is the measure of position and direction. Now, the size of an angle is independent of the length of the lines which form it; it may, therefore, be employed to ascertain the position of the nearest as well as of the most distant, of the smallest as well of the largest, objects: it is applied with the same ease and certainty to worlds as to atoms, and measures with equal precision the direction of the ray of light which emanates from the remotest of the fixed stars, and of that which is reflected from the surface of a crystal. The angle, in fact, is a measure of position without regard to distance or to magnitude, a measure of direction without reference to the length of the real or imaginary straight lines by which direction is indicated.

We can easily foresee the important purposes to which such an instrument of calculation may be applied. Wherever two points exist, there the angle may be employed to ascertain their position; wherever two lines exist (whether those lines be real or imaginary, drawn on paper or traced in sand, or supposed to extend from the remotest visible point to our eye), there the angle becomes a measure of their direction. The position of a single object, or the direction of a single line, may also be determined by means of points or lines arbitrarily assumed. Light, emanating from luminous objects, travels to our eye in straight lines; the direction of the rays of light, therefore, is at once submitted to measurement: motion, abstraction being made of all adventitious resistance, takes place in straight lines; the direction of a moving body may therefore be calculated. The direction of the rays of sound, heat, and electricity, may be ascertained by the same simple means, and thus the angle becomes a powerful instrument of calculation applicable to all those sciences in which position and direction, considered as abstract relations of matter, bear a part.

No less powerful and certain in its application is the *triangle* as a measure of distance. The properties of the triangle, like those of the angle, are altogether independent of the length of the lines which form it. Provided that the angles of any two triangles be equal each to each, the sides will bear precisely the same proportion to each other in both, and in either case, certain parts of the triangle being known, the rest can be calculated. The application of the triangle, as an instrument of calculation, is co-extensive with that of the angle. Where the angle determines the position of an object with regard to any other object, or to any point or line arbitrarily assumed, the triangle measures the distance of that object: where the angle determines the direction of a ray of light, heat, or sound, the triangle may be applied to ascertain the distance of the source from which the light, heat, or sound, emanates: where the one is used to trace the direction of motion, the other may be employed to find the amount of that motion, or, in other words, the distance of the moving force from the point at which the moving body comes to rest. In like manner, also, as the angle measures position and direction without regard to distance, so the triangle measures distance without regard to magnitude. Thus nearly the same methods are employed to ascertain the height of the mountain which we cannot scale, or the breadth of the river which we cannot cross, as to determine the distance of the most remote of the heavenly bodies from each other, or from our planet.

The angle and triangle have been adduced as examples, and by way of illustration merely; but if we possessed no other instruments of calculation than these, we should be prepared to construct sciences of vast extent, and, as far as they went, of absolute certainty. The position and distance of every object which we could perceive, of every point, however minute, which the eye, aided by the most delicate and powerful instruments, could descry, would be determined, and thus the broad foundations of geometry and astronomy would be laid; the direction of the rays of light, heat, sound, electricity, &c., would be subjected to measurement; every motion which took place in straight lines, whatever might be the cause of it, would obtain a measure both of its direction and amount; and the form of every material object which presented regularity of outline and symmetry of parts would be described and measured with accuracy and precision. Wherever, in fact, abstract properties and relations of matter formed the objects of science, wherever position could be represented by a point, or direction by a line, there abundant materials would be collected, ready for the application of those higher theories which give to sciences already certain their last finish and completeness.

The cause of the superior certainty of astronomy, optics, and dynamics, will now be evident. These sciences deal chiefly with the abstract properties and relations of matter, which admit of being represented by points and lines, and give free scope to the application of the various instruments of calculation which abstract reasoning has invented. But even these sciences are not absolutely perfect. Although, as speculative sciences, they deal chiefly with the abstract relations of matter, as practical ones they encounter at every step forms of matter possessed of distinct and peculiar properties; some of these forms of matter are employed in the manufacture of instruments by which we aid our imperfect senses, and others exercise a material influence in modifying the impressions made on those senses. The amount of that influence must be determined by experiment before we can place full reliance on the observations to which our calculations are to be applied. For instance, till the refractive power of the atmosphere was experimentally ascertained, and allowance was made for it in our observations, the apparent, and not the real, position of distant objects was all that could be determined; in like manner, till the manufacture of lenses for our telescopes was improved, the unequal refraction of the rays of light introduced uncertainty into the observations made by means of these instruments. Till our knowledge, therefore, of the properties of the matter of which our instruments are made, or to which our observations are directed, is complete, we cannot hope to attain to certainty.

The study of the properties of the several forms of matter is the next object, therefore, which we have in view, and the numerical expression of these properties constitutes a second series of instruments of calculation of much more limited application than those we have already considered, but capable of attaining to nearly the same degree of certainty. The determination of these numerical values is the object of observation and experiment. It is by these that we have discovered the laws which regulate the expansion of solid, fluid, and æriform bodies by heat, the pressure of the atmosphere at different elevations,

the velocities of the several imponderable fluids, and the proportions in which the several elementary substances combine. These, and a thousand other facts numerically expressed, become so many instruments of calculation prepared to our hands and ready for our use. It is not till these numerical expressions assume a regular shape, and admit of being stated in abstract terms, that we place full reliance on their accuracy; and we require, for the most part, their repeated re-application to the form or condition of matter from which they were derived before we employ them with all the confidence which we readily place in the results of abstract reasoning.

These numerical values have every degree of generality. Some of them apply to all forms of matter alike, as gravity; others to one state or condition of matter only, as the laws which govern the motions of fluids; and others again to but one species of matter, as the refraction of light by air, glass, or the diamond. These values, once accurately ascertained, can be re-applied with certainty to matter in every respect *identical* with that from which the calculation was first derived. But here the natural philosopher has a difficult task to perform; he has to ascertain by the use of his senses, or by the aid of instruments, the identity of the form of matter to which his calculations are to be applied with that from which they were originally derived, and as his senses may deceive him, and his instruments be wanting in delicacy and accuracy, errors may creep in. The employment, therefore, of calculations derived from experiments or observations on the various forms and states of matter will be open to this source of fallacy, and the results obtained will be, in many cases, of inferior certainty to those which the more perfect instruments of calculation, applied to the more abstract properties of matter, furnish. It must be self-evident, indeed, that it is much more difficult to identify any form or state of matter than to determine position or direction. Still, close and accurate observation, aided by instruments of improved construction, may ultimately bring the sciences in which these more limited calculations play a prominent part, to a perfection little inferior to that which astronomy, optics, and dynamics, have obtained.

But here we reach the limits of possible certainty, and enter upon the wide domains of probability. We have hitherto restricted the use of calculation to the abstract properties and relations of matter to the various agents by which the material universe is governed and controlled, or to those forms of matter of which one portion is identical with every other. But this leaves untouched a vast variety of objects to which calculation has been extensively and successfully applied, with no hope of attaining certainty it is true, but preferring probability expressed by numbers to the most exact phrases of ordinary language.

The objects to which I allude are such as undergo frequent and irregular changes, and have hitherto defied all attempts to apply to them any exact and unvarying measure—as, for instance, the atmosphere, which, in respect of density, temperature, humidity, and electric condition, is constantly varying, or the tides and winds. Another class of objects consists of those substances which bear the same name, and have a close resemblance to each other, without being identical. Some of these substances belong to the world of inanimate matter, and having

been submitted during their formation to influences of varying intensity, differ from each other in form and structure, as coal, and the several varieties of ores and stones; others again have been endowed with life, and have arrived at different ages and different degrees of development under external circumstances of infinite variety, as wood, horn, bone, &c.; and others again are to a greater or less extent the work of men's hands, and for that very reason can rarely be identical; such are the various metals extracted from ores, and the articles into which they are wrought, as chains, wires, &c. Now these several materials are extensively employed in the arts of life, and it is of the greatest importance to know their exact properties anterior to their employment; but as the wood which comes from the same tree is not of equal hardness throughout, as one specimen of iron has not precisely the same properties as another, as ropes, or chains, or wires, to all outward appearance identical, are found to support different weights, and to allow of different degrees of tension, it becomes necessary to ascertain the *probable*, and not the actual strength, &c., of the materials we are about to use; to find, in fact, the mean of a number of quantitative values, and employ it as the best substitute for those certain calculations which, having been derived from experiments on the several states and forms of matter, are re-applied to others in every respect identical with them.

Here, then, is the first application of the numerical method, and for a long time this was its only application. The advantage attending its employment is so obvious, that no practical man has ever dreamed of substituting for it the indefinite expressions which are yet so much in use in the less advanced sciences. No engineer contents himself with saying that steel is harder than iron, or iron more ductile than lead, when he can express the hardness of the one, and the ductility of the other, in numbers, even though the numbers be mere approximations to the true numerical value of any particular specimen of these metals.

But besides its application in determining the mean properties of the materials which we employ in the arts, the numerical method is resorted to, as has been already mentioned, wherever any general result is brought about by the combined action of a number of causes which we are unable to distinguish with accuracy, and to which we can apply no certain measure. We may instance atmospheric changes produced by the joint operation of a variety of causes, and dependent upon transient influences which, taken separately, we are unable to estimate or to measure. We have recourse, therefore, to the numerical method, and having ascertained the mean value of the sum of these causes, we employ it as a foundation for reasoning, and a standard of comparison. As examples of the application of the numerical method, we may instance barology and atmology, and the sciences of the winds and tides; and the extensive series of observations which are now making on the tides at various points of our coast, and on atmospheric changes in several parts of the globe, will shew the value attached to the numerical method by those who are in the daily habit of applying more certain and powerful instruments of calculation.

The principles on which the value of the numerical method depends are extremely simple, and as this is the only form of calculation which can be applied to the vital sciences, it is important to obtain a just conception of the degree of reliance which can be placed upon it. In

the application of numerical values to particular cases, observation or experiment must be employed at every step we take, and both, as we know, are subject to error. The question, therefore, naturally arises — if our observations and experiments, though assisted by the most powerful and delicate instruments, are erroneous, how is it that the sciences to which they are applied have arrived at such perfection? This perfection has been attained in spite of such errors. Though there can be no doubt that the most careful observations are liable to error, yet it is a principle, established as well by reason as by experience, that as the error may be either in excess or in defect, the one class of observations will neutralize the other, and the mean results, supposing the observations to be sufficiently numerous, will be the real quantitative values of the object or objects observed. This principle will hold good in any case, so that the natural and necessary defects of observation and experiment cannot be urged as an argument against the employment of the numerical method, even in those sciences of which the dependance on observation and experiment is the most close. But this principle of compensation is not limited in its application to the errors of observation, it applies with the same certainty to the objects themselves as to the observations made upon them; so that the mean value of a number of objects which differ numerically from each other will be the actual value of the greater number of the things observed, the extremes both in excess and in defect balancing and neutralizing each other. The numerical method, or the method of averages, therefore, on the one hand corrects the errors of observation and experiment, and on the other equalizes the value of the things observed.

These two important principles—first, that the errors necessarily existing in our observations and experiments (the consequence of the imperfection of our senses, or of our instruments) neutralize each other, and leave the actual value of the object or objects observed; and, secondly, that the extreme quantitative differences existing between the several things observed, compensate one another, and leave a mean result which accurately expresses the value of the greater number of the things so observed,—form the hinges on which the numerical method turns.

Both these principles presuppose the existence of a considerable number of observations; for, it is obvious, that if the observations are few in number, the extremes may be all in excess, or all in defect; just as the gambler, contrary to all expectation, may continue for many times in succession to turn up cards of the same colour, or throw the same high number on the dice; and again, for as many times successively to turn the reverse colour, or throw the lowest number: it is only by multiplying his throws that he learns the real chances of the table. There is another reason for increasing the number of our observations. It is that in some cases a single remarkable exception to a general rule will introduce a very high numerical value, which, considerable as it is, when divided amongst a large number of observations, makes an extremely minute addition to each of them; whilst, if the observations were few in number, that addition would be very considerable. The same remark applies with equal force, *mutatis mutandis*, to a single low numerical value.

As to the number of observations which may be sufficient in any

particular case to avoid error or to determine a real average, no general rule can be laid down. Where our means or instruments of observation are imperfect, or the things observed differ widely in numerical value, a large number of observations is necessary: in other cases a smaller number may suffice. Perhaps the best rule which can be given for ascertaining whether the observations which we have collected are sufficiently numerous to yield a true average, is to divide the whole number of observations into groups of equal size, and compare them the one with the other: if the average value of each group is the same, we may safely conclude that we have arrived at the true mean; if not, we must increase the number of our observations, and the size of our groups, till the desired equality is obtained. For instance, one hundred observations having been collected, are divided into four parts, containing twenty-five observations each; if, on comparing these four parts with one another, we find that they yield the same average result, we have good reason to regard such result as the real average. But, if the average results are different, we must divide the one hundred observations into a smaller number of parts, and if necessary, increase the number of our observations. If each collection of fifty or of one hundred observations, as the case may be, yields the same average, we may confidently regard that average as the true one. Regularity of increase or decrease in a series of averages, will also afford a strong probability of the exactness of each individual average.

But if it is important to derive our averages from a large collection of observations, it is not less essential to group together those observations only which bear a close resemblance to each other. In the ordinary processes of arithmetic, as well as in the more general calculations of algebra, we take care that the unit which we assume as the basis of any calculation, whether it be an inch, a foot, a yard, or a mile, shall always have the same value; and if we represent that unit by an abstract quantity, we multiply it by whole or fractional co-efficients, but never allow it to change its original value. In like manner, in the collecting and grouping of facts, the greatest care is necessary to include in the same group those only which are identical and of equal value in respect to that property or quality which forms the basis of our classification. Thus, the botanist groups in the same class and order those plants only which have the same number of stamens and the same number of pistils; the crystallographer those crystals only which are identical both in the number and direction of their sides; and the physician those cases only which resemble each other in one or more symptoms which are supposed to be characteristic of a certain disease. These groups of facts furnish us with data for reasoning, and with materials for the formation of theories. But the absolute identity of all the facts so grouped together is essential to the accuracy of our reasoning, and to the truth of our theories. These observations apply with equal force to the grouping of those facts which form the groundwork of our numerical enquiries. Although absolute numerical identity is, from the very nature of the case, impossible, there is nothing to prevent us from obtaining the strictest resemblance in every other respect. The attainment, indeed, of this close resemblance, of this identity, in respect to all those particulars which are not variable, is obviously more

necessary in numerical investigations than in any other enquiries whatever.

With these remarks on the general principles of the numerical method, and on the obvious cautions which ought to be observed in collecting the facts which are to form the basis of our calculations, I conclude this short preliminary sketch of the application of numbers to the sciences which have to do with unorganized matter.

The foregoing observations have had for their object the establishment of the great and important principle that, *the certainty of a science is exactly proportioned to the extent to which it admits of the application of numbers*. An attempt has been made to shew that abstract reasoning has provided us with instruments of calculation of absolute certainty and of infinite power; that there are certain "primary existences," such as space and time, and certain relations of matter, such as position, direction, and distance, which, being in their very nature numerical, form the natural and appropriate objects for the application of these "instruments," and that those sciences in which they are most extensively applied, are most certain. These instruments of calculation may be termed *general*, in contradistinction to those which are procured by means of experiments or observations on the different forms and states of matter, and on the several agents by which all material changes are produced. These latter may be termed *special* instruments of calculation. They are of more limited and difficult application, and in every respect more dependent on the uncertain and fallacious exercise of the senses. The sciences, therefore, in which these calculations play a prominent part, to the exclusion of the more exact instruments of calculation, hold the second place in point of certainty. Of these sciences chemistry furnishes a good example.

With the employment of these general and special instruments of calculation possible certainty ends, and probability begins. Here, too, the numerical method finds its first application, and it promises to do for variable quantities and probable events, what the pure mathematics have already done for constant quantities and certain occurrences: that is, it promises to carry the sciences of probability to the highest perfection of which they are susceptible.

It appears, then, that the first aim and object of the speculative, as well as of the practical philosopher, is to obtain precise numerical statements of all the facts established by observation and experiment; to ascertain the exact quantitative values of the objects on which he speculates, and of the materials with which he works, and until he has securely fixed these values, he feels that he has fallen short of the requirements of science. Calculation, indeed, is felt to be "the very soul of science," a necessary element of precision, a measure of the accuracy of observations and experiments, and an unerring test of the truth of theories. In one form or other it pervades all the sciences which have to do with unorganized matter, or with the various subtle and powerful agents by which the material world is governed and controlled. If numerical certainty is not attainable, numerical probability becomes its natural substitute; both are frequently employed together, and the one is often converted into the other.

The success with which calculation has been applied to unorganized

matter, and the confidence with which the natural philosopher resorts to it on all occasions, have not failed to exercise a powerful influence on those who pursue the study of organized beings; and a growing disposition to apply calculation to the phenomena of life, is one of the characteristics of the age in which we live. Already has the application of the numerical method to the varying conditions and social relations of mankind given birth to a science of vast extent and of unequalled interest—the science of Statistics. This science is so comprehensive that it defies all attempt at definition, and admits of no precise or accurate limitation. Man, considered as a social being, is its object; the mean duration of his life, and the probable period of his death; the circumstances which preserve or destroy the health of his body, or affect the culture of his mind; the wealth which he amasses, the crimes which he commits, and the punishments he incurs—all these are weighed, compared, and calculated; and nothing which can affect the welfare of the society of which he is a member, or the glory and prosperity of the country to which he belongs, is excluded from its grand and comprehensive survey. As a branch of this vast subject, political economy, till lately a bye-word and a jest, is asserting its right to the character of a science, and state medicine is putting forward its claim to attention and respect.

As the greater part of the science of statistics has a more or less intimate connexion with the studies of the physician, it will be instructive to consider somewhat at length the general principles on which the value of the numerical method in its application to statistics depends.

The most important and most simple application of the numerical method is to the determination of the frequency of events, without reference to the causes, whether few or many, by which those events are brought about. The data on which the several kinds of insurance depend form the best examples of this application of numbers. Thus the data for the insurance of life are derived from calculations of the deaths occurring in a given number of persons during a given period; those for the insurance of health from calculations of the number of persons taken ill during a given period, as well as of the duration of their maladies; and insurances of property from similar calculations of the casualties to which it is exposed.

In all these cases we merely ascertain the occurrence of an event, without regarding the causes by which it is produced. But little error, therefore, can creep into our calculations; and as they are reapplied to as many cases as those from which they were originally obtained, or at least to a very large number of cases, we may predict the result with nearly as much confidence as that with which the astronomer foretells an eclipse, or the chemist the effects of a decomposition. The success attending the operations of insurance societies is a sufficient proof of the reliance which we may place on these calculations. They hold, indeed, the same place among the sciences of probability which those of the astronomer hold among the exact sciences. Their certainty arises from the simplicity of the observations required, and the vast number of facts from which the data are originally obtained, and to which they are ultimately reapplied.

Another application of the numerical method in statistical researches

is to the determination of the average of a number of objects which differ in their numerical value. The natural sciences furnish numerous instances of this use of numbers. The changes which take place in the temperature, density, moisture, and electric condition of the atmosphere, in the direction of the winds, in the height of the tides, and in a variety of similar phenomena, give ample scope to the employment of the numerical method. As examples in vital statistics may be mentioned the stature and weight of the body, and the development of muscular force. In political statistics the varying prices of articles of merchandise or food. The mean results obtained in these instances are rarely reapplied to a great number of cases, except for the purposes of comparison. But whether we employ the numerical method to determine the probability of an event, or to ascertain the mean of a number of objects which differ in their numerical values, we must use the same caution in collecting and applying our facts. In either case, both the facts from which our averages are derived, and those to which they are reapplied, must be numerous.

Before we proceed to the application of mean results to individual instances, we must examine a little more minutely the value of the numerical method in its more general applications. The abstract value of the numerical method, indeed, has never yet been called in question, but had it been doubted, the success attending the institution of insurance societies would convince the most sceptical. A striking illustration of the reliance which may be placed on calculations obtained from a large number of facts, is afforded by the constancy with which the same numbers are reproduced year after year by the same combination of circumstances. An excellent example of this kind is afforded by the statistics of crime. In reference to this subject Quetelet observes, that "in all that relates to crimes, the same numbers are reproduced with a regularity which cannot be overlooked, even in the case of those crimes which would seem most likely to baffle all attempts at prediction, such as murders, which are usually the result of quarrels, arising without sufficient motive, and in circumstances, to all appearance, the most fortuitous. Nevertheless, experience proves that not only do the murders annually committed amount to nearly the same number, but even the instruments by which they are perpetrated are employed in the same proportions."* The same remark applies to the sentences passed on the criminals. Thus, in France, out of every 100 impeachments, there are 61 condemnations, and this number remains nearly constant year by year. When we reflect on the great variety of circumstances under which crimes are committed, and on the various causes which influence the sentences passed on the criminals, we cannot but be struck with the reproduction, year by year, of the same average results; and we naturally infer, that however numerous and however various may be the causes to which an event owes its existence, these causes will be accurately reproduced in equal intervals of time, so long as the same circumstances exist, and provided that the number of facts observed is sufficiently great. From this general principle we may draw the corollary, that if the aggregate circumstances vary materially in equal intervals of time,

* "Essai de Physique Sociale," Vol. i. p. 8.

the numerical results will be different, and thus indicate the variations which have taken place. As a means of comparison, then, the numerical method offers us invaluable assistance in determining the permanence or variation of the causes which contribute to the production of any given event. One of the best illustrations which can be given of the value of statistics, as a means of comparison, is to be found in the bills of mortality. These prove, beyond a doubt, (and no loose observations expressed in ordinary language could do this,) that the average duration of human life is continually increasing, and that many of the most fearful causes of disease and death are gradually losing their power. They shew, too, the comparative salubrity of different climates and of different modes of life, and furnish in this way most useful information to the physician and to the legislator.

A very obvious and most important application of statistical investigations is as a test of the truth of theories. It often happens that an event is attributed to a cause which varies in intensity under different circumstances or in different localities, and we have no other means of testing the accuracy of our opinion than by comparing the frequency of the event in question, under the varying influence of the assumed cause; and should the same numbers be obtained in every case, we are justified in rejecting that cause. If this rule be applied to the received opinions on the subject of phthisis pulmonalis, we shall soon see how void of foundation they are. It has been often stated that this disease is of more frequent occurrence, and more fatal, in cold than in warm climates. The admirable Statistical Reports of Captain Tulloch entirely disprove this assertion.* A single fact, quoted from this Report, will suffice to demonstrate the necessity of submitting these opinions to the searching test of numbers:—"Out of an aggregate strength of 86,661 (soldiers) serving in the Windward and Leeward Command, not fewer than 1,023 were attacked by that fatal disease, being 12 per 1,000 annually, while out of an aggregate strength of 44,611 Dragoon Guards and Dragoons serving in Great Britain, only 286 were attacked, being about $5\frac{1}{2}$ per 1,000. Nearly the same remarkable disparity exists between the mortality from consumption in other parts of the West Indies and in our own country; and it is not less worthy of remark, that the Black Troops are still more exposed to the ravages of this disease than the Europeans themselves. It is obvious that statistical investigations alone can give us correct information on subjects such as these, and that we might have cherished the same absurd and fatal errors for centuries to come, whatever pains we might have taken to test them by common observation expressed in common language. It would not be easy to estimate the amount of evil which this error has produced. Let the weak and wasted invalid, banished from the country of his birth and of his home, obliged to forego all his cherished comforts, and to break through all his long-formed habits, to leave friends and kindred behind him, and to waste his little remaining strength in reaching the land which is doomed to be his grave—let him tell how great is the amount of suffering which such unfounded opinions as these create.

* Statistical Report of the Sickness, Mortality, and Invaliding among the Troops in the West Indies, p. 8.

But the highest aim and best achievement of statistics is the discovery of general laws. I have already observed, that the more we increase the number of our observations, the more do individual peculiarities, and exceptions to the general rule, disappear; and the more certainly do the averages obtained represent the normal condition of the objects observed. These averages admit of strict comparison the one with the other, and this comparison discovers laws closely resembling in form and character the laws which preside over dead matter. Thus Quetelet* remarks, that "the curve of viability" (the line which indicates the probability of living at different ages), "bears a singular resemblance to that of the tendency to crime, and a resemblance still greater to that of the development of forces." In like manner the obstacles which oppose the increase of population, act precisely in the same way as the resistance which is offered to a moving body by the medium in which it moves. The curve, too, which represents the mortality of small-pox at the several periods of its duration, is, like the curves which represent increasing and decreasing material forces, a regular one.† The following observations of Quetelet deserve attention, as they place in a very striking light the strong analogy which exists between the laws established by the aid of statistics, and those which have been obtained by abstract reasoning or by experiment:—"All observation tends to confirm the truth of that proposition which I long since announced, that *that which concerns the human race, considered collectively, is of the order of physical facts*; the greater the number of individuals, the more completely does the will of individuals disappear, and allow the series of general facts, which depend upon the causes by which society exists and is preserved, to predominate. These are the causes which we have to seize, and, when they are known, we determine their effects upon society just as we determine effects by their causes in the physical sciences. We must admit, however afflicting this truth may, at first sight, appear, that *on submitting to careful experiment unorganized bodies, and the social system, we are unable to say on which side causes act in their effects with the greatest regularity.*" ‡

But though the statistical method were of limited application, and of doubtful utility in all other respects, it would possess a high value as a means of insuring accuracy. Hitherto the sciences which have to do with unorganized matter, and especially the mixed mathematical sciences, have owed their superior certainty not merely to the ease with which they allowed of the application of numbers, and to the strictness of their definitions, but in a great degree to the substitution of signs and symbols for words of variable and uncertain import. Statistics have introduced the same precision into the vital sciences, and had they effected nothing more than the substitution of figures for words, they would have established a strong claim to our approbation. Nothing can be more variable or worse defined than the meaning of the words which have been hitherto employed by the physician in his description of disease, or in his statement of the results of the treatment he has

* Quetelet, Op. cit. Vol. i. p. 173. † British Medical Almanack, for 1838.

‡ Ibid. Vol. ii. p. 247.

adopted. What meaning are we to attach to such vague terms as "sometimes," "occasionally," "generally," "in the majority of cases?" These terms, as every one knows, have every possible signification, and vary in their meaning with the varying disposition, and more or less sanguine character of those who use them. The "sometimes" of the cautious is the "often" of the sanguine, the "always" of the empiric, and the "never" of the sceptic; but the numbers 1, 10, 100, 1000, have but one meaning for all mankind. If, then, for no other reason than the one now assigned, the attainment of accuracy, the numerical method ought to be employed wherever it can by possibility be applied.

The application, then, of the numerical method to living beings, in all their social relations, constitutes the science of statistics. Some of these relations form objects of research to the moral philosopher—others to the physician—others again to the political economist—but all of them to the legislator. The examples which have been adduced, will serve to shew how large a part of the science of statistics is connected with the studies of the physician. In addition to the knowledge of disease affecting individuals which may be obtained from this source, he derives from it all his information as to the best means of preserving the health and prolonging the life of communities. This most important study has been greatly neglected, on the one hand, by the physician, who is the only person prepared to pursue it with advantage, and, on the other hand, by the legislature, which alone can effectually apply the knowledge furnished by the physician. We may venture to indulge the hope, that when statistical researches shall have brought the science of hygiene to the perfection of which it seems susceptible, governments will not be backward to make a practical application of the knowledge which has been acquired. If it were possible to express by figures the waste of human life occasioned by the absence of legislation on the one hand, and by the existence of absurd and mischievous laws on the other, the government of our country would not incur the heavy responsibility and deep disgrace of being totally indifferent to the lives of its subjects.

Statistics, then, considered as a speculative science, will scarcely suffer by a comparison with the most perfect of the mixed mathematical sciences. The mean results which it obtains are almost as constant as the numerical values determined by the experiments of the natural philosopher, and the former are reproduced with almost as much certainty by a recurrence of the same circumstances as the latter are by a repetition of the same experiments. The laws, too, which statistics discover, have all the regularity and symmetry of the laws which are established by observation or experiment. For all the purposes of reasoning or comparison, therefore, the calculations of statistics may be employed with confidence; whilst the precision arising from the introduction of numbers in the place of words, forms by no means the least among the advantages which it offers. Considered, on the other hand, as a practical science, statistics will bear a comparison with the most certain of the sciences of experiment and calculation, provided always that the mean results which have been obtained from a large collection of facts, are re-applied to facts equally numerous, or, at 11

events, to facts sufficiently numerous to include the several numerical values which have been encountered in the original calculation.

Although the justice of the preceding observations may be readily admitted, and the value of the numerical method as an instrument of discovery, a mean of comparison, and a test of the truth of theories may be conceded, considerable doubts may still be entertained as to the possibility of applying our average results to the studies of the physician, and especially to the practice of medicine. And here the first enquiry which suggests itself is, how far do the functions of living beings, in health and disease, admit of the application of numbers? Is the numerical method as applicable to living beings as to unorganized matter? We need not hesitate to answer in the affirmative. The profession of medicine gives ample scope for the application of numbers. If we consider the health of large masses of men placed under different circumstances, and acted on by different influences, it is to the numerical method that we must look for accurate information as to the effect of these circumstances. If we would compare one human body with another in respect of stature, weight, muscular force, or the development of its several parts, we must also resort to the numerical method. If, again, we direct attention to the several functions performed by the human body in a state of health, we find that most of them can only be adequately described by the aid of numbers. Thus the amount of the *injesta* and *egesta*, the quantity of the several secretions, the products of the respiratory process, the frequency of the pulse and respiration—none of these can be expressed without the aid of numbers. If, from the state of the body in health, we pass to a consideration of its diseased conditions, we meet with the same necessity for the employment of calculation. The prevalence of the several causes of disease in different countries, and under different circumstances, their period of incubation, the length of their course, their fatality—these, and a great number of similar instances are, strictly speaking, numerical. Then, as to the action of remedies, and the relative advantage of different modes of treatment—nothing can determine these but an accurate and numerical comparison of their fatality and duration under the several methods of treatment recommended. These are a few, and but a few, of the instances in which the numerical method is the only one from which we can hope to obtain any valuable information; but these few examples will suggest to every experienced man a thousand other cases in which the employment of this method cannot fail to lead to most important results. But it is quite unnecessary to accumulate instances; if numbers were invariably substituted for words of doubtful meaning, scarcely a page of any medical treatise would be without its figures.

But, it may be asked, what good purpose will this substitution of figures for words accomplish? Will it enable the physician or the surgeon to treat individual cases of disease with more success, or to anticipate their results with greater confidence? In other words, does the numerical method admit of application to individual cases? It must be conceded by the most strenuous advocate of this method, that such application is limited. For it is self-evident that as our averages have been themselves procured from a great number of objects differing

in their numerical value, if we attempt to apply these averages to individual cases we shall encounter over again all the varieties from which our original numbers were obtained. And it would be as absurd to attempt to determine the event of a particular case of disease by the average result of a great number of cases, as it would be to attempt to foretel the period of an individual's death by the bills of mortality, or the amount of his fortune by the average wealth of the community to which he belongs. The fallacy of such application is not more apparent in the practice of medicine than it would be in the science of meteorology. It is just as ridiculous to attempt to measure the result of a single case of disease by the application of an average, as it would be to foretel the quantity of rain which will fall in a given place on a given day by means of the average quantity which falls in the course of a year. There is one consideration, indeed, which renders the application of mean values to individual cases more liable to error in medicine than in other sciences, viz., the remarkable exceptions to general rules, which are peculiar to life and living beings. We know that the food of one man is the poison of another; that a medicine which shall act as a purgative in one person, shall produce the effect of a narcotic in another; and that a substance which shall cause exquisite pain to one man, shall not occasion the slightest inconvenience to another. These and other idiosyncrasies, though of comparatively rare occurrence, will occasion greater difficulty in the application of general results to individual cases, than is encountered by the natural philosopher in his practical applications to the most uncertain of the sciences which form the subject of his study.

But there is still another cause which prevents the application of our averages to individual cases; and that is the wide difference which exists between our mean and our extreme numbers. Thus, to take a familiar instance:—The duration of human life may extend from a moment to upwards of a century and a half, and any attempt to predict the duration of the life of an individual by the use of the average would be regarded as in the highest degree preposterous. Another illustration of a totally different kind is afforded by the pulse, which, in persons of the same age, and in a state of rest, has a range of about 40 beats;* and in the same individual, under different circumstances of excitement, a range at least equal to its frequency in a state of rest. Any attempt, therefore, to apply an average frequency to a particular case must be regarded as unreasonable. In this respect the application of the numerical method to dead matter may often be made with much greater confidence, for it frequently happens that the extreme are not very remote from the mean results. Thus, for instance, the engineer knows that the friction produced by the contact of iron, or of any other material employed in his machinery, is different for different specimens of that material; but he finds that the mean quantity of friction produced differs little from the extreme, and he applies the average value with a certainty that no very material practical error will take place in the working of his machines. Such cases as these rarely occur in the study of phisic; the application of mean values to individual cases must therefore be extremely limited.

* This calculation is made from some unpublished observations on the frequency of the pulse at different ages.

But though the mean values admit of very limited application to individual instances, it is not so with the extreme values. These may be applied with confidence and with advantage. For instance, supposing that a great number of observations have determined the earliest and the latest period at which a poison begins to act, any symptom, arising in a suspicious case, before or after those two points of times may be reasonably attributed to other causes, especially if the observations which we have collected are numerous; for on the number of the observations in these and all such cases depends the value of our conclusion. Sometimes, again, we may obtain important information by a comparison of the extremes of two numerical series. Thus, in the case of the static lung-test, the smallest weight of lungs which have respired being taken, and the greatest weight of such as have breathed being noted, any number falling short of the one, or exceeding the other extreme, will give the highest probability, in the one case, that the child had not breathed, and in the other that it had; and whenever the number ascertained in any particular case approaches either extreme, we are justified in speaking with a confidence proportioned to the closeness of the approximation. The result of some observations, not yet published, on the effect of posture on the pulse, furnish an excellent example of the application of extreme numerical results to individual instances. In cases of consumption I have had occasion to observe that the greatest effect produced upon the pulse by a change from sitting to standing is less than the least effect produced by the same change on the same frequency of pulse in healthy persons. If this circumstance shall prove to be common to a few other diseases with which it is possible to confound this affection of the chest, this peculiarity of the pulse will enable us to ascertain that any suspected case belongs to one of those diseases; but should it prove peculiar to phthisis, an important means of diagnosis will be added to those we already possess.

These few examples will prove that the extreme values obtained by the numerical method admit of important practical application; but with these exceptions, to which I have thus briefly alluded, the application of numerical values to particular cases is apt to mislead us; but it is not more likely to mislead than a reliance upon general though strong impressions, sometimes made by many and sometimes by few observations, which impressions, when promptly acted on, constitute what is called tact—a gift invaluable to its possessor, but useless to all the world besides. In his treatment of individual cases, the physician has constant opportunities of applying this valuable talent, and it is to him what common sense is to men in the ordinary affairs of life,—reason acting without rule;—it is a prompt application of experience already acquired to the particular circumstances of an individual case. But if we closely examine this talent, we shall perceive that it is a rough calculation of chances, in which all the elements of the calculation are rapidly seized and accurately estimated. The object of the numerical method is to supply the want of tact by furnishing the inexperienced with accurate calculations of the probable event of different diseases, and the probable consequences of different modes of treatment. These calculations supply but one element for the solution of the problem, for they apply only to cases of average severity; they leave to the experience of the physician

the task of ascertaining all the circumstances in which any particular case departs from the average severity. After all, then, the numerical method leaves many occasions for the exercise of that peculiar tact which constitutes the essential difference between the successful and unsuccessful practitioner of our art.

In discussing the advantages of the numerical method, I have already noticed some of the objections which may be urged against it. The opponents of this method, without attempting to deny its abstract value, are wont to bring forward its fallacies as arguments against its employment. It might be expected, therefore, that I should enter into some discussion of the numerous errors with which the statistician stands charged, and defend him and his method against the objections as well as the ridicule of his opponents. This, however, I have no intention of doing, as the slightest reflection must convince the most sceptical that the errors which occur in statistical investigations are precisely those to which the results of common observation, expressed in common language, are equally exposed. The defects of the numerical method are, in fact, the defects of observation and experiment, its excellencies are peculiar to itself. The only difference existing between the more ordinary methods and that which I venture to advocate is in the strictness of the terms employed. To prove that the errors of the numerical method are in no respect dissimilar from those of common observation, I may advert to the well-known instance of the Government Annuities, which being calculated on the mean duration of human life under ordinary circumstances, were applied to picked cases. Here the error committed (and a most serious loss it entailed on Government) was that of a man who should apply general impressions of the fatality of a disease, obtained from an inspection of all the cases, without any exception, which had come under his care, to the most favourable examples only of that disease. This error is of daily occurrence, and is certainly as liable to occur to the advocate as to the opponent of the numerical method. Dr. Bisset Hawkins' work on Medical Statistics supplies us with one or two examples. He compares, for instance, the mortality of the adult French prisoners in this country, during the year 1813, with the mortality of the entire population of Rome; and the health of the picked garrison of Gibraltar with that of some of the cities on the Continent.* In these cases the comparison would not have been less exact if words had been substituted for figures; the error was in the reasoning, and not in the form of expression.

Another striking illustration of the identity of the errors of common observation with those of the numerical method is afforded by Dr. Bryan Robinson,† one of the first persons who applied the numerical method to the investigations of the functions of the human body. Robinson thought that the stature of the body had a considerable influence on the pulse. Accordingly, he made a number of observations on the pulse of persons of different statures, the lowest point of his scale being formed by young children, and the highest by full-grown adults. He found that as the stature increased the pulse diminished in frequency, and that there was a striking approach to regularity in the rate of

* Pp. 160, 215.† *Animal Economy*, p. 269.

decrease. He accordingly set to work to discover an empirical formula for calculating the frequency of the pulse from the height of the body, and found "that the mean pulses of regular-proportioned bodies are to one another as the biquadrate roots of the cubes of the lengths of the bodies." Here the fault committed is obvious—the effect of age was entirely overlooked. In order that his observations should decide the point, it was necessary that the ages of the parties examined, as well as all other known causes of variation, should be equal, but their statures different. In this instance the error committed was that with which an ordinary observer or experimenter would be chargeable, who should decide upon the influence of a supposed cause, without making all other causes with which he was acquainted equal in the several cases observed. In whatever way, then, an observer may choose to express the results of his observations and experiments, whether he employs ordinary language, or resorts to numbers, he must guard against the same errors, he must use the same precautions. The ordinary observer, no less than the statistician, may make an unwise choice of a subject of investigation, and devote himself to some childish puerility; and when he has chosen a subject, he may observe without care, and experiment without a plan; he may group together dissimilar facts, deduce from them wrong principles, and make absurd applications of his general laws to individual instances: but his errors will be the same, whatever may be the mode of expression which he adopts; the only difference will be, that error will contrast more strongly with the strict expression of the numerical method, than with the loose and ill-defined phrases of common observation.

In the foregoing sketch, I have confined myself much less strictly than some might deem desirable to the application of the numerical method to medicine. The sciences are so closely connected with each other, and the methods of investigation which they adopt are so similar, that our choice of illustrations will be best guided by the degree of confidence which we place in them. For this reason, and that I might entrench myself behind a strong defence, I have availed myself of illustrations drawn from the more exact sciences, and have alluded to the sources of their perfection. Those who know nothing of the methods of investigation which these sciences make use of, pay deference to their high authority; they believe in the perfection of astronomy because they see the fulfilment of her predictions; they admit the power of chemistry because they see the marvels which she accomplishes; and they cannot but respect the methods by which these sciences have attained their present certainty. This certainty, as I have endeavoured to prove, is entirely due to the extent to which they admit of the application of numbers. The more perfect our instruments of calculation, and the more simple the observations to which they are applied, the more perfect are the resulting sciences; and as our instruments become less perfect, and our observations more difficult and more entangled, so does science become less certain, less theoretically true, and less practically useful. Still, however difficult our observations, and however complex our facts, certainty is always possible so long as the objects to which our calculations are applied are naturally identical, or can be artificially brought to an exact resemblance with each other.

Where identity ceases, there certainty ends, and probability begins; and there too the numerical method finds its first application. And it is most worthy of remark that the student of the exact sciences, who is familiar with the use of the most certain instruments of calculation, has never hesitated to apply the numerical method, and has required no arguments to convince him of its advantages; whilst the medical man, whose science seems most to need the application of such a method, and to offer abundant occasions for its employment, still doubts its efficacy, and prefers the obscurity of general phrases to the clearness and precision of numbers. Does not the simple fact, that medicine required a Louis to teach the advantages of the "*methode numerique*," and to set an example of its employment, so long after its introduction into the more advanced sciences, prove the necessity of making those sciences an example to our own? The certainty, indeed, to which the exact sciences have attained, is sometimes attributed to other causes; but the slightest reflection will convince us that calculation is the sole source of their superiority. For though the amount of knowledge which has been acquired strike us with astonishment, and the certainty with which it is applied to the prediction of future events produce a feeling approaching to awe, yet we have only to examine more closely to find that the best of that knowledge is rather an acquaintance with numbers, and relations, and proportions, and sequences, than with the real nature and essence of things; and that man's boasted mastery over nature is obtained by skilfully dividing her empire, and setting kingdom against kingdom, and power against power, eliciting from one form or combination of matter, the means whereby to vanquish and control another; in all things the minister and humble imitator of Nature, but hopeless of being admitted to a knowledge of her secrets. Of what use would be the noblest of our theories if calculation did not give them a practical value? Reduce gravity, from a numerical theory, to the bare expression of the fact that all bodies attract each other, and what service would it render to the astronomer? Convert the theory of definite proportions to a vague and general expression, and what advantage would the chemist derive from it? Rob science of calculation, and we degrade it to an art; introduce a numerical theory into the most confused assemblage of facts, and they start at once into a science. Without calculation the most comprehensive theory may remain almost barren of practical results. What, for instance, has the beautiful theory of the circulation of the blood done for medicine? It has not taught us the use of the lancet, for that was in requisition long before the time of Harvey, and we treat inflammation now as we did in the days of Hippocrates. As an acknowledged fact, indeed, the circulation of the blood has had an indirect influence upon other medical theories, but what direct practical application does it boast? Where are we to find a measure of the state of the circulation itself? The pulse, the only measure we possess, scarcely gives us more information now than it gave to Celsus, more than eighteen centuries ago. Its changes are still as difficult to appreciate, and not less difficult to describe; and though Floyer invented the pulse-watch, and Heberden strongly recommended its employment, how little has yet been done to bring to perfection this imperfect measure of the circulation!

Medicine, again, possesses, in the theory of Jenner (I use the term theory in the sense of the expression of a general fact), an instrument of extensive usefulness, but we sought in vain for any measure of its value till the numerical method was applied to it. It is the employment of numbers which alone can enable us to form a just estimate of the benefit which vaccination confers, and of the extent of the protection which it gives. These examples will suffice to prove that the imperfect state of medicine is not due to the dearth of true and comprehensive theories, but to the want of a numerical measure of the theories themselves.

It is important to distinguish medicine considered as an *art* from medicine considered as a *science*. As a practical art it must necessarily remain imperfect; as a theoretical science there is nothing to prevent it from attaining a high degree of perfection; and we may rest assured that every addition made to our science will be a gain to our art. Without venturing to foretell the amount of the advantages which calculation may confer on physiology and medicine, we may safely assert, that in exact proportion to the difficulties which beset the study of any science ought to be the precision of the methods which it employs, and there can be no doubt that numbers are more precise than words. On this superiority of numbers to words the advocate of the numerical method may safely rest its claims to general acceptance, and its right to supersede all other methods of investigation.

Though the question proposed at the beginning of this essay has now received a partial answer, other causes of the uncertainty of medicine remain to be noticed. What is the reason, then (exclusive of its neglect of calculation), that medicine still remains a conjectural art? Is it because she has not yet collected facts enough? There is no science, however perfect, which can boast of possessing so vast a store. Is it that time has not yet ripened the fruits of observation and experiment? No science can boast so high an antiquity. Is it that the objects to which she devotes her attention are not important enough to stimulate the industry of her votaries? What object can be more important, what task more noble than the alleviation of suffering and the restoration of health? What strong motive to exertion can be proposed which medicine does not hold forth? Where, then, shall we seek for the causes of its uncertainty? Its practical character, the chief source of its value, is the very element of its weakness. If medicine were less exclusively a practical *art* it would soon become a more perfect *science*. If the alternatives of ease or suffering, of life or death, did not depend upon the treatment which the medical man adopts, he would be more willing to try the efficacy of new methods of cure—if, in fact, individual cases hold a less prominent place in his thoughts, he would direct more attention to the discovery of general laws. But this practical character of our art has other disadvantages; this too exclusive attention to detached facts makes the medical man impatient of all investigations which have no obvious and immediate practical bearing. It is this which prompts the incessant enquiry, *cui bono*? addressed to all those who desert the beaten paths of practical routine, though in the hope of returning enriched by the spoils of new and promising enquiries. I would not be understood to undervalue the labours of the practical man. I wish

merely to point out an error into which he is liable to fall. But there is still one other defect necessarily inherent in an exclusively practical *art*, and more especially in our own. The application of the few general principles which we possess to individual cases is so uncertain that it leads to a desponding view of the future progress of our profession. It leads us to despair of ever placing our own science, if indeed it may be called a science, in the proud position occupied by the more certain sciences; it makes us lose sight of that beautiful description of the true philosopher, which one of the truest and most distinguished philosophers of our own time has sketched—the character of hoping all things not impossible, and believing all things not unreasonable. If we must needs despair of the future progress of our art, let us at least have better reasons than those we now possess for indulging our despondency. Let us adopt those strict and rigorous methods of investigation, those clear definitions of the terms we use, those accurate instruments of measurement, the application of which has raised other sciences to such certainty and perfection; and should these fail, then, and not till then, we may safely assume that the structure and functions of the human body are so complicated, and the subtle principle which guides and regulates the human frame so incomprehensible, that steady industry, and patient thought, and subtle and comprehensive reasoning shall, for once in the history of science, be lavished in vain.

ON RAILWAYS IN BELGIUM.

THE attention of the public has been recently attracted to the subject of the establishment of a general system of railways in Ireland, and opinion appears to be much divided as to the policy of the Government interfering either to promote or regulate this undertaking. It would not be fitting in this place to discuss the arguments which have been advanced on both sides of this question; but the experience of the European state which has first adopted a government system of railway communication, may throw some light upon the subject, and in some degree tend to the settlement of a question which is of momentous importance to Ireland, and which, in conjunction with other measures at present in operation, holds out the prospect of great and lasting improvement to that country.

Belgium is the first state in Europe which has established a general system of railways, embracing the whole of the kingdom, and planned and executed by the Government at the public cost. The project was first put forth in the year 1833, and the object proposed was to unite the principal commercial towns on one side with the sea, and on the other with the frontiers of France and Prussia. In this respect Belgium is most favourably situated for the experiment of a general system of railways: it is of a compact form, of moderate extent, surrounded on three of its sides by active commercial nations, and on the fourth by the sea, which separates it only by a few hours' voyage from England. On its western side are the two large and commodious ports of Antwerp and Ostend, and its eastern frontier is only a few leagues distant from the Rhine, by which it becomes united to Southern and Midland Europe. Hence it possesses a near market for its productions,

and offers many facilities for an extensive transit trade. The nature of the country, also, is most favourable, being generally very flat, and requiring but few of those costly works of levelling, tunnelling, and embankment, which have so swollen the expense of similar undertakings in this country.

The first step which the Government took for the accomplishment of its object was, to employ a number of competent engineers to survey the kingdom, and to determine the main lines with reference not only to the general features of the country, but also to the interests of the several large towns, and to their internal and foreign relations. On the 1st of May, 1834, a law was passed authorizing the Government to carry their project into execution. Mechlin was taken as the centre of the system, with four branches extending from that town, in different directions, to each frontier.

Northward,—to Antwerp.

Eastward,—by Louvain, Liège, and Verviers, to the frontiers of Prussia, whence it was expected that it would be continued by a private company to Cologne.

Southward,—through Brussels and the province of Hainault, to the French frontier near Valenciennes.

Westward,—by Dendermond, Ghent, and Bruges, to Ostend.

It appears doubtful whether Brussels or Mechlin is most favourably situated for the central station. The former is the seat of Government, and is in a rather more direct line from Ostend, on the western frontier, to the eastern boundary; but, on the other hand, the line selected through Mechlin passes by more large towns, and the distance between Antwerp and the eastern frontier is rendered much shorter than if the line were carried through Brussels. Other considerations may have tended to influence the choice of the Mechlin line; but it is understood that regret is beginning to arise that Brussels was not made the centre of the system.

The total length of the lines projected by the first law was 239½ English miles, of which 159½ miles, or exactly two-thirds, are already completed.

The several sections were opened at the following periods :—

From Mechlin to Brussels . .	12·61 miles,	on 5th May, 1835.
Mechlin to Antwerp . .	14·60 ,,	3rd May, 1836.
Mechlin to Dendermond . .	16·59 ,,	2nd January, 1837.
Mechlin to Louvain . .	14·76 ,,	10th September, 1837.
Louvain to Tirlemont . .	11·03 ,,	22nd September, 1837.
Dendermond to Ghent . .	18·95 ,,	28th September, 1837.
Tirlemont to Waremmes . .	16·88 ,,	} 2nd April, 1838.
Waremmes to Ans (near Liège) . .	11·87 ,,	
Ghent to Bruges . .	27·65 ,,	12th August, 1838.
Bruges to Ostend . .	14·60 ,,	28th August, 1838.

Total . 159·54 Miles

There remain incomplete on the eastern line, the sections from Ans to Verviers; and on the southern line, the sections from Brussels to the French frontier. The minister of public works promises, however, that the latter line will be open as far as Tubise in the present year (1839), and the remainder will probably be completed in 1840 and the following year.

By a subsequent law, dated the 26th of May, 1837, the Government was authorized to extend the system by the construction of a line from Ghent through Courtray to the French frontier, on the road to Lisle, with a branch to Tournay; and by uniting the provinces of Namur, Limbourg, and Luxembourg, to the original system, by means of branch railways. The length of these additional lines will be from 90 to 100 miles. Some of them are already commenced, and two will probably be opened about the middle of the year, namely, the line from Ghent to Courtray, and that from Landen to St. Trond, in Limbourg.

With respect to the line which is to connect the capital of the province of Namur (Namur) to the system, a decree of the 28th of August last, fixes that it shall pass through Vieuville, two miles north of Charleroi, and take the most advantageous course through the provinces of Namur and Hainault to the southern main line. The preferable point of junction appears to be Braine-le-Comte.

Thus the Belgian Government has undertaken the task of establishing a general system of railways in that country, uniting the principal towns in the manner most advantageous to the general interests of the kingdom, without overlooking the particular interest of the several localities. The people have had the advantage of a much earlier introduction of this important means of communication, than if the undertaking had been left to private speculation,—without risk to individuals,—without the interference of private interests,—on lines, perhaps, which of themselves would have offered no temptation to private enterprise, but which as part of an extensive system will repay, either directly or indirectly, the money expended upon them. The Government will, in all probability, recover its outlay from the profits of the undertaking, but will assuredly be repaid by an augmentation of revenue arising from the increased commerce and traffic throughout the kingdom. If it be objected that the Government will be enabled to exercise too despotic a power over the means of public communication, the experience of similar private undertakings in our own country may give rise to a question whether the control of the state is likely to be more absolute than that of the directors of a chartered railroad.

The Belgian Government, however, does not restrain private enterprise upon any other lines than those entering into the general system; and among numerous applications already made it has granted two lines, one of which, the Upper and Lower Flénu, in Hainault, is complete, and the other from Charleroi to Vireux-upon Meuse, on the French frontier, is in course of construction.

All the railways established by the Government, were formed with provision for a double line of rails, but only one line was originally laid down, it being the intention to add a second by degrees, according to the wants of the traffic. Between Brussels and Antwerp, the double line was completed in 1837. The same plan of commencing with a single line has been generally adopted in the United States. This circumstance must be borne in mind in considering the following statement of the expenses of construction.

The cost of the ten sections already completed, comprising the expenses of locomotive power, stations and buildings, was about 1,360,000*l.*, or 8,526*l.* a mile. It appears from an account of the

expenses up to January 1838, that the cost of construction alone amounted to 86·8 per cent. of the sum then expended; and that of locomotives, carriages, stations, and buildings, to 13·2 per cent. The outlay upon each of the six lines open at the latter period, was as follows:—

	Length.	Total Cost.	Average Cost, per Mile.
From Mechlin to Brussels . .	12·61 Miles .	£ 75,716 .	£ 6,004
„ „ Antwerp . .	14·60 „ .	124,775 .	8,546
„ „ Dendermond . .	16·59 „ .	76,044 .	4,583
„ „ Louvain . .	14·76 „ .	108,428 .	7,346
„ Louvain to Tirlemont . .	11·03 „ .	128,628 .	11,661
„ Dendermond to Ghent . .	18·95 „ .	105,784 .	5,582
Total . .	88·54 Miles	£ 619,375	£ 6,995

The cost, however, of the four sections since completed, appears to have been considerably greater, and to have amounted to 10,432*l.* a mile. The expense from Brussels to Antwerp, with a double line of rails, was 7,368*l.* per mile; and that of the four other sections, with a single line, was 6,829*l.* This comparatively greater cost of the latter was owing to the numerous works of art, bridges, viaducts, cuttings, and fillings, and particularly to the tunnel, of 984 yards in length, between Louvain and Tirlemont. It is worthy of notice, that the estimates of the engineers made in 1833 have been exceeded on the above four sections by only 8 per cent.

Let us now compare these results with the cost of similar undertakings in this country, and elsewhere. The lowest sum yet incurred in the construction of a well-executed railway in England, is stated to be 10,000*l.* a mile. This was the amount on the Newcastle and Carlisle, and on the Wigan lines; but of the former only about one-half the length was laid with a double line of rails. Others, however, (exclusive of lines in the vicinity of the metropolis, the cost of which is enormous,) have amounted to 40,000*l.* a mile. The cost of the Manchester and Liverpool line was 38,553*l.* per mile; of the Warrington and Newton, a branch of the latter, 12,470*l.*; of the Leeds and Selby, 10,500*l.*; of the Dublin and Kingstown, 41,823*l.* The short line from London to Greenwich, of only three miles, has cost more than 600,000*l.*, or 200,000*l.* a mile. The estimated cost of the 44 railways for which Acts were obtained in 1836 and 1837, was 25,692,500*l.*; their length, 1,457 miles; and the average estimated cost per mile, 17,600*l.* But judging from the experience furnished by those already executed, this estimate will fall considerably short of the real expense. A striking instance of the insufficiency of the parliamentary estimates is afforded by the London and Birmingham Railway. The estimate was 2,500,000*l.*; the cost, up to 30th June, 1838, has been 4,553,557*l.*, exhibiting an excess over the estimate of 82 per cent.; and a further sum of 500,000*l.* was then required to complete it. The latter amount was leviable upon the shareholders for a portion of the shares not paid up, but it was expected that the debt at the completion of the undertaking would amount to about 2,000,000*l.*, the interest of which must be paid out of the profits before any dividends can be made to the proprietors of shares. This circumstance, however, has had so little influence in discouraging

the public, and the expectation of ultimate profit is so sanguine, that the original shares of 100*l.*, upon which 95*l.* have been paid, are at present (January 1839) quoted at 170*l.*; and the quarter shares of 25*l.*, upon which 5*l.* have been paid, at 29*l.* 5*s.* A similar excess is likely to occur on other lines. On the Great Western it appears, from a recently revised estimate, that the original sum of 2,500,000*l.* will be exceeded by somewhat more than 2,000,000*l.*, and in the present state of the works there cannot be any certainty that this amount will suffice for the completion of the undertaking. It may be difficult to foresee all the contingencies which are likely to arise in the construction of a railway; but some measure appears necessary to prevent so great a discrepancy between the estimates and the actual cost. In France, the estimated expenses of four different projected lines between Paris and Havre, vary from 15,400*l.* to 21,400*l.* a mile. In comparison, therefore, with England or France, Belgium possesses great advantages in the cheap construction of railways; but it falls as far short, on the other hand, of the United States of America. There the cost is stated to fluctuate between 2,000*l.* and 6,000*l.* per mile; and Mr. Porter gives an instance, in the second volume of the "Progress of the Nation" (p. 76), of a railway in that country which cost only 1,312*l.* 4*s.* per mile, and even that amount was greatly enhanced by a change in the mode of construction introduced after the line was completed.

This enormous difference of cost, not only between lines situated in different countries, but between several in this country, constructed under similar circumstances, suggests an enquiry into the causes of such a disproportion. The following have been enumerated as the most prominent:—

1st. Excessive parliamentary expenses incurred through contests carried on during one, two, or even more sessions, in obtaining a Bill. This cause of expense arises out of competition between opposing lines, which is sometimes real, but more frequently fictitious, and is instituted by interested parties, not perhaps in their own names, but in those of the landowners. In many cases this charge alone, even in very long lines, has exceeded 1,000*l.* per mile. The following statement will afford some notion of the sums which have been expended under this head. In some cases the amount contains the expenses of surveying, and other disbursements, which necessarily precede the Act of Incorporation. On the other hand, it exhibits only the costs defrayed by the companies obtaining the Act, exclusive of those incurred by the different parties opposing the Bill in Parliament.

Statement of expenses incurred in obtaining Acts of Incorporation for the following railways:—

London and Birmingham	£72,868	Great North of England	£20,526
Great Western	88,710	Grand Junction	22,757
London and Southampton	39,040	Bristol and Exeter	18,592
Midland Counties	28,776		
Birmingham and Gloucester	12,000	Total	£303,269

The total estimated cost of these eight railways was 11,595,800*l.*; the above item amounted to two and a half per cent. of that sum, or nearly 500*l.* per mile. If the same ratio be applied to the 1,475 miles, for which Acts were obtained in 1836 and 1837, the amount spent in those

two years under this head would be 729,500*l.* The most extravagant, however, of the above cases, has been far surpassed by the charges attending the contest between the parties supporting the five several lines from Brighton to London. The amount has not been published, but it must have been very great; and the event was, that the Government was obliged to employ an official engineer to report upon the several lines, and upon that which appeared to him the most expedient. This source of expense, it is obvious, would be in a great measure avoided by the Government undertaking the responsibility of the undertaking.

2nd. The enormous demands for compensation by proprietors, through, or near, whose land the proposed line passes, and who withhold their assent, till purchased by the Company on the most ruinous conditions. There are instances in which this species of extortion has amounted to 10,000*l.* per mile. One case has recently been the subject of a trial in the Court of Chancery, in which a nobleman in the county of Essex obtained from the Directors of the Eastern Counties Railway, in consideration of his withdrawing his opposition to the bill, 20,000*l.* for land belonging to him required by the Company; and 100,000*l.* for the injury done to his estate. It is true that the avowed object of the individual in question was to oblige the company to select another line, and that the purchase might have been avoided by the adoption of that line. The latter course, however, was not followed, and an action having been brought to compel the fulfilment of the contract, the Court decided in favour of the validity of the deed, and the equity of the claim. One of the grounds of his lordship's objections to the railroad passing through his property is worthy of record: the following is a quotation from the Vice-Chancellor's judgment:—"It further appeared from his lordship's affidavit, that his lordship was very partial to the old English amusement of fox-hunting, which was a source of high gratification, not only to himself, but to all the gentlemen in the county. His lordship's high feeling naturally prompted him to stand forward as a champion against any violence of that healthful recreation, in which they had all so long participated." The contrast afforded by the United States of America is very striking. Mr. Fripp, in his account of the New York and Erie Railway (in the present number of this Journal, page 10) mentions, that "besides the support granted by the State Loan, donations of great value have been made to the Company by individuals owning lands on the route of the railway. These donations consist of many thousand acres of land: for instance, 50,000 in one county only, proffered by the proprietors for the purpose of inspiring confidence in the stock, providing for dividends, and the payment of interest, and to secure the speedy construction of the road." The circumstances of the two countries, it is true, are very different, but the fact deserves notice, as it exhibits one of the causes of the superior cheapness in the construction of railroads in the latter country.

A remarkable instance of the prevalence of the same system of extortion in France is afforded by the adjudication of the Jury of Expropriation upon a part of the Versailles and St. Cloud Railway. In one case, the lessee of a field at Versailles demanded 849*l.* for one acre of land, and produced documents, signed by some architects of that place, in support of his estimate. It was, however, reduced by the Jury to 16*l.*

Another proprietor claimed 265*l.* for the suppression of a right of way across his land: the Company offered him 10 francs for it, and the Jury awarded him nothing. The whole amount claimed was reduced from 61,926*l.* to 25,626*l.*

A fair estimate of the proportion which the cost of land and compensation bears to the total expenses of the railway, may be formed from the average results of two of the principal lines already completed:*

	Total Cost.	Land and Compensation.	Per Centage Proportion.	Average.
Grand Junction . . .	£1,512,150	£211,230	14·0}	13·7
London and Birmingham	4,553,557	622,507	13·7}	

If the same proportion be applied to the railways which have been actually commenced since the year 1830, and of which the estimated cost amounts to about 40,000,000*l.*, the sum payable to owners of lands and houses will be 5,500,000*l.*; and if one-fourth (a very moderate allowance) be added for deficient estimates, the total amount will be nearly 7,000,000*l.* The effects of the diversion of so large a capital into a new channel, of the unexpected acquisition of a large amount of ready money by the agriculturist, of the destruction of houses in the suburbs of towns, and the impetus thereby given to the building trade, are well worthy of consideration, apart from the other consequences attending the construction and operation of railways.

3rd. Extravagant expenses are often incurred by companies pushing the termini of their lines too far into the centre of towns, and by carrying their lines through towns, in order to effect which it becomes necessary to purchase much valuable property.

4th. Engineers, it is believed, have incurred heavy, and sometimes ruinous, expenses, in order to render their lines mechanically as perfect as possible, without duly considering whether the advantages thus obtained will compensate for the expenditure requisite to produce them. By admitting a certain degree of undulation, accommodated to the natural inequalities of the ground, very large savings may often be effected, without introducing any serious impediments to the working of the lines. It is also in the heavy parts of the work, in cuttings and embankments, that many of those unforeseen and contingent expenses occur, which so frequently cause the actual cost of construction so much to exceed the estimated cost. The Newcastle and Carlisle Railway, which has been already quoted for the economy of its construction, is remarkable for its sinuosities. There are several curves of about a quarter of a mile in radius, and in one part the line runs round the base of a hill, of very moderate diameter, at a less curve probably than any other railway in the kingdom. Adopting these views, the Irish Railway Commissioners found that by a very inconsiderable loss of mechanical power, and without, in any respect, interfering with the working capabilities of their proposed lines, that is to say, without the introduction of any gradients exceeding the limit in their original sections (of 16 feet to a mile), a saving of 31½ per cent. might be effected, or an amount of 1,674,000*l.* on a line of 359 miles. The advantage of this reduction in the neighbourhood of towns may be deduced from the fact, that while

* The exact proportion on the Liverpool and Manchester line cannot be given, but it rather exceeded the above average.

the average saving per mile of the whole distance was estimated at 3,200*l.*, the saving at the entrance into Dublin was calculated at 18,200*l.* per mile, viz.—

	Entrance into Dublin.	Average of the whole.
Original Gradients . . .	£52,925	£14,813
Reduced , , . . .	34,508	11,639

On the Belgian railways the gradients never exceed 1 in 250. From Louvain to Ans they average 1 in 333, which is the limit adopted above by the Irish Commissioners.

5th. Another source of extravagant expenditure arises from the haste with which these works are frequently pushed forward ; which is such, in many cases, as to require day and night work, and many other heavy extra charges.

6th. Short lines are frequently rendered expensive by their requiring a greater proportionate number of stations, warehouses, workshops, and other establishments ; those always forming a large item in the general cost of construction.

7th. The nature of the country frequently presents difficulties only to be overcome by an enormous expenditure in the formation of tunnels, cuttings, embankments, bridges, &c.

The Irish Railway Commissioners pronounce a decided opinion, that unless expenses of this nature can be avoided in Ireland, there is but little prospect of a general railway system being attended in that country with either private or national advantage.

It will be observed that most of the causes which have enhanced the cost of railways in this country would be in a great measure avoided, or might be controlled by the Government, if the undertaking were in their hands. But supposing that their influence were merely exerted to suppress the two first causes of expenditure—parliamentary costs, and excessive compensation to proprietors of lands and houses—and the removal of the other causes were left to private judgment, it will be seen that, notwithstanding the difference in the value of land and labour in this country, the expense of constructing a railway in England under ordinary circumstances, which already falls short of that incurred in France, would not much exceed that incurred in Belgium. In this country the cost may be taken at from 10,000*l.* to 12,000*l.* per mile, which has been the actual cost of two lines subject to the expenses already enumerated ; in France at 15,000*l.*, and in Belgium at 8,500*l.*, in both of which countries the construction is in the hands of the Government.

We have not the means of comparing the different branches of expenditure in this and foreign countries. Labour, which is the principal portion, is paid higher in England ; but it may be doubted whether, as compared with France and Belgium, its superior productiveness will not to a considerable extent diminish this disadvantage. Land also must be much more expensive, particularly under the present system of purchase ; but we lie under less disadvantage with respect to materials and mechanical processes.

The estimate of the total expense of the several lines projected by the Belgian Government is as follows, according to the statement put forth in the "*Livret du Chemin de fer de la Belgique*," published by the Royal Geographical Establishment in Brussels. The cost of a single

line of rails in a level country is taken at 6,950*l.* per mile, and in a hilly or broken country at 8,559*l.*, an increase of 23 per cent.

158 miles completed, at £6,950 per mile	£1,097,280	} £1,786,200
81½ „ unfinished, at £8,559 „ „	688,920	

239½ „ by the law of 1st May, 1831.

37½ „ of level country, at £6,950 per mile	£259,200	} 738,000
56 „ of hilly country, at £8,559 „ „	478,800	

93½ „ by the law of 26th May, 1837.

332½ Miles	£2,524,200
To this must be added the cost of engines and carriages, stations, workshops, and buildings, &c., about 14 per cent.	355,800
Total	£2,880,000

This sum averages 8,660*l.* per mile. The extent of the lines proposed by the Irish Railway Commissioners is remarkably approximate—359 miles. Their estimate, with the reduced gradients, is 3,643,353*l.*, averaging 10,150*l.* per mile, or 17½ per cent. more than the Belgian lines.

The carriages on the latter are divided into four classes, the fares of which vary according to the degree of comfort which the conveyances possess. They present a great contrast, as regards amount, with the English fares. The average charge per post league of 4,000 metres, or 4,374 yards, is,—

In Berlins	35 c.; equal to 14·08 c., or less than 1½ <i>d.</i> per mile.
Diligences	30 „ 12·06 „ 1¼ <i>d.</i> „
Chars-à-banc	20 „ 8·04 or rather more than ¾ <i>d.</i> „
Wagons	10 „ 4·02 or rather less than ½ <i>d.</i> „

There are also wagons for the transport of merchandise, but it is only since the commencement of 1838 that heavy goods have been conveyed by this means. Previous to that period not even the carriages of persons travelling by the railway could accompany them; it was necessary to forward them by the ordinary roads.

The following statements will shew how far the Belgian surpass the English railroads in cheapness of fares. In the former country there are four classes of carriages, the cheapest of which is only two-sevenths, or less than one-third of the English, and only four-tenths of 1*d.* per mile. In England there are sometimes not more than two classes, the lowest of which bears a very different and a much higher proportion to the superior carriages. The Manchester and Liverpool Railway affords a favourable opportunity of comparison, as the distance is about the same as that between Brussels and Antwerp; the former being about 30 miles, and the latter 27½ miles. The fares are as follows:—

Liverpool and Manchester, 1837.	
	s. d.
Mails	6 6
Coaches	5 6
Wagons	4 0

Brussels and Antwerp, 1838.	
	s. d.
Berlins	2 11
Diligences	2 6
Chars-à-banc	1 8
Wagons	1 0½

On the English line, therefore, the lowest class is nearly two-thirds of the highest, and the rate per mile for the lowest class is equal to the rate of the highest on the Belgian lines, viz.—

Liverpool and Manchester.			
Mails	.	.	2½d. per mile.
Coaches.	.	.	2½d. ,,
Wagons	.	.	1½d. ,,

Average of Belgian Lines.			
Berlins	.	.	1½d. per mile.
Diligences	.	.	1½d. ,,
Chars-à-banc	.	.	¾d. ,,
Wagons	.	.	½d. ,,

The following are the rates of fares on some other of the English lines:—

Table of Fares, and Rate thereof per Mile, on various Railways.

	Great Western: to Maidenhead, 22 Miles.		London and Birmingham: Whole Distance, 112½ Miles.		Southampton: to Hartley Row, 38 Miles.		Grand Junction: Whole Distance, 82½ Miles.		Newcastle and Carlisle: Whole Distance, 60 Miles.		Greenwich: to Deptford, 3 Miles.		Dublin and Kingstown, 6 Miles.	
	Fares.	Rate per Mile.	Fares.	Rate per Mile.	Fares.	Rate per Mile.	Fares.	Rate per Mile.	Fares.	Rate per Mile.	Fares.	Rate per Mile.	Fares.	Rate per Mile.
1st Class.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.	s. d.	d.
Mail . . .	6 6	3'54	32 6	3'48	.. ..	25 0	3'63	11 0	2'20	.. ..	.. ..	.. ..	.. ..	.. ..
Coach . .	5 6	3*	30 0	3'20	9 0	2'84	21 0	3'05	10 0	20'0	1 0	4'00	1 0	2'00
2nd Class.														
Close . .	4 0	2'18	.. ..	.. ..	.. ..	.. ..	8 6	1'70	0 6	2'00	0 8	1'33	0 8	1'33
Open . .	3 6	1'90	20 0	2'16	6 0	1'80	14 0	2'03	7 6	1'50	.. ..	0 6	1'00	1'00

The above table shews that among the lines having one of their termini in London, the fares are highest on the Birmingham, and lowest on the Southampton, leaving out of consideration the Greenwich line, which, from its difference of length, cannot enter into the comparison. The charge, however, on the Newcastle and Carlisle line is from one-fifth to one-third less than any of the others. It proves also that no uniform principle has guided the directors of railway companies in determining the rates of fares. In general the charge by the second class, or open carriages, is about two-thirds of that by the first class carriages; but this is not the case on the Newcastle and Carlisle line, where the proportion amounts to three-fourths; nor on the Greenwich, upon which line it is only one-half. The most striking fact, however, is, that the cost of construction appears to have no influence whatever upon the fares. There is no difference in this respect (at least in the first class carriages) between the Dublin and Kingstown line, which cost 42,000*l.* a mile, and the Newcastle and Carlisle, which cost 10,000*l.*; and a very slight difference between the Grand Junction, which cost less than 20,000*l.* a mile, and the London and Birmingham, which cost 40,000*l.* The fares also on the Greenwich are the same in amount as those on the Dublin Railway (both short lines), although the distance is only one-half as great; but they bear no proportion to the difference of cost, which was five times greater on the former line. If this element may thus be left out of consideration, on what grounds have the directors proceeded? Simply, it would appear, on that of fixing the highest rate which the public will consent to pay, or upon the principle maintained in the Post-Office, of determining what quantity of traffic will yield as much profit as they require at the rates which they choose to fix, and neglecting or resisting an equivalent increase at a lower rate, because they are unwilling to incur the risk of loss by finding more car-

riages and more extensive accommodation. It is not sufficient to assert that the fares are moderate, and the accommodation adequate to the present traffic. The experience of the railroad system itself, compared with turnpike roads, proves that as the fares are reduced, and the accommodation is extended, the traffic will more than proportionally increase. There can, indeed, be no doubt that if the present high rate of charge be maintained, the monopoly which railways possess will prove a great obstacle to increased travelling. That the directors have little to fear from adopting a system of low fares will appear from the following comparison of the present amount of travelling in England and Belgium.

The Liverpool and Manchester Railroad offers a very favourable comparison for this country, as the intercourse between those two towns is perhaps greater than between any other two places at an equal distance. The number of passengers booked at the Company's offices on that line since its opening has been as follows:—

In 1830 (from 16th September to 30th December)	71,951
1831 (the whole year)	445,047
1832 " "	356,945
1833 " "	386,492
1834 " "	436,637
1835 " "	473,849
1836 " "	522,991

The population of the towns on this line, exclusive of the adjacent districts, which teem with inhabitants engaged in commerce and manufactures, was, in 1831, Liverpool, 196,694; Manchester, 270,963; Warrington, 19,155;—total, 486,812. This number could not have been less in 1836 than 523,000, which is the number of passengers using the railroad in that year. On an average, therefore, each inhabitant may be supposed to take one trip in a year.

In Belgium the number of passengers booked at Brussels, Mechlin, and Antwerp, inclusive of two intermediate stations, in each year since the opening of these lines, has been as follows:—

	Brussels.	Mechlin.	Antwerp.	Total.
1835 (8 last months)	215,342	206,097	..	421,439
1836 (Antwerp only 8 months)	379,588	263,048	226,671	871,307
1837	475,155	364,317	305,995	1,145,467
1838 (10 months)	511,326	338,351	299,146	1,148,823

The population of these three towns did not, in 1838, amount to one-half of that on the English line, namely, Brussels, with its suburbs, 134,302; Mechlin, 22,895; Antwerp, 75,363;—total 232,960; and neither the population nor the commercial activity of the surrounding districts can be compared with those of its competitor, yet the intercourse in 1837 was more than twice as great, and with reference to the difference of population, was five times as great, the average number of trips to each inhabitant having been five per annum. A comparison with the intercourse on both lines previous to the formation of the railroads is equally favourable to the Belgian undertaking. On the Liverpool and Manchester line the average number of passengers which the coaches carried, in the year 1825, was estimated at 450 daily, or 164,250 per annum. The number actually conveyed by the railroad, in 1836, was 523,000, shewing an increase of 218 per cent., or rather more than three times the former number; the fares having been reduced

from 10s. and 6s. to 5s. 6d. and 4s.: the higher rates one-half, and the lower only one-third. On the Belgian line the number of passengers between Brussels and Antwerp, before the opening of the railway, is said to have been 80,000 yearly. The rates of conveyance have been reduced from 4s. and 2s. 6d. to 2s. 6d. and 1s. 0½d.; the higher fares two-fifths, and the lower three-fifths: and in 1837 the number of passengers booked at Brussels and Antwerp, excluding Mechlin, whence a portion of the passengers were proceeding on other lines of railway, was 781,250, shewing an increase of 876 per cent., or about nine and a half times the former number. If Mechlin be included, the increase will be fourteen times the former number. An analysis of the classes of travellers will shew that this superior activity is in a great measure owing to the cheapness of fares. Of the total number of passengers, during the 6 months ended 30th October, 1836, the proportion using each class of carriages was as follows:—

Berlins,	paying	2s. 11d.	1·7	per cent.,	yielding	a revenue of	5	per cent.
Diligences	,,	2s. 6d.	3·7	,,	,,	,,	9	,,
Chars-à-banc	,,	1s. 8d.	22·2	,,	,,	,,	32	,,
Wagons	,,	1s. 0½d.	72·4	,,	,,	,,	54	,,
			100·					
							100·	

The proportion of persons travelling short distances only in wagons is still greater, but the above is sufficient to shew how large a portion of the whole revenue of the Company is derived from passengers of the lower class, paying a very small fare; and it is a just inference that the high rates of fares on the Liverpool and other railroads in England do very materially check travelling; that to the artisan they entirely prohibit travelling for pleasure; that they restrain even the wealthy in the use of this source of recreation; and it can scarcely be doubted that they interfere with journeying on business. Whether an increase of numbers at a low rate would repay the corresponding additional outlay for locomotive power, wear and tear, &c., is another question, upon which the evidence afforded by the Belgian Railway is also important. The following result of the operations on all the lines since they were severally opened, tends to shew that the experiment has been successful.

			Expenses.	Receipts.	Excess of Receipts.
1835	1 Section open 8 Months	.	£ 6,748	£ 10,756	£ 4,008
1836	{ 1 " 4 " }	.	17,244	33,004	15,760
	{ 2 " 8 " }	.			
1837	{ 3 " 6 " }	.	46,216	56,676	10,460
	{ 8 " 4 " }	.			
1838	{ 6 " 3 " }	.			
10 Months.	{ 8 " 4 " }	.	64,768	105,340	40,572
	{ 10 " 3 " }	.			

The cost of these 10 sections, including the materials, was about 1,360,000*l.*, the interest of which sum, at 5 per cent. per annum, would amount to 68,000*l.*; and for 10 months, to compare with the above, it would be 56,667*l.* But it must be borne in mind, that the whole of the ten sections were only in operation during three months, and therefore the profits of 1838 must not be charged with the cost of all the sections. The receipts at Ans, which section was only open seven months, amounted to nearly one-third of those at Brussels during ten months, and the line from Bruges to Ostend was not open three months. The following were the receipts at each principal town:—

Brussels . . .	£29,882	Louvain . . .	£7,728
Antwerp . . .	16,553	Tirlemont . . .	4,218
Ghent . . .	13,114	Ostend . . .	1,607
Mechlin . . .	11,640	Other Towns . . .	11,027
Ans . . .	9,571		

This statement sufficiently indicates the favourable prospects of the undertaking.

With reference to the amount of profit which the Belgian Government looks forward to receiving from the railways, it is necessary to state the view which they take of their position as proprietors.—1st, As the undertaking might be prosecuted upon three different systems.—1st, As a work of public utility, without requiring that the receipts should cover the expenditure. 2nd, As a financial resource, and requiring that the receipts should exceed the expenditure, and yield an income for public purposes, like the Post-Office in England. 3rd, As an establishment which should neither be a burthen nor a source of revenue, and requiring merely that it should cover its own expenses, consisting of the charge for maintenance and repairs, with a further sum for the interest and gradual redemption of the invested capital. The Belgian Government adopts the last system, and expects to realize an annual profit of 5 per cent. upon the original outlay beyond the current expenses. It has, however, been estimated, that the line from Brussels to Antwerp will yield 16 per cent.

From a comparison of the receipts and expenses, it appears that the latter amounted, in the first 10 months of 1838, to 61 per cent. of the former. In the last 6 months of 1833, the disbursements on the Liverpool and Manchester Railway amounted to 58 per cent. upon the gross receipts, which is stated to be a higher rate than is usually calculated by railway projectors, and is attributed to the necessity of keeping up large warehousing establishments for receiving, housing, dispatching, and distributing goods. The carriage of goods on the Belgian railways was commenced, but only partially, in 1838. As, however, so large a portion of the lines opened in that country have been only a few months in operation, it would not be fair to draw any unfavourable inference from the comparison.

The following statements will shew the progress of travelling on the several lines since their opening. It has been deemed advantageous to distinguish the several subordinate stations, because they all came into operation at different periods, and it would not otherwise be possible to display the increased intercourse of the more important towns.—(See *Table, next page.*)

If one-fifth be added to the year 1838, to complete the remaining two months, the total for that year will be 2,305,941.

Only three stations have been established long enough to admit of a comparison of the annual increase in the number of travellers. They are as follows:—

	Mechlin.	Brussels.	Antwerp.
Per centage Increase in { 1837 . . .	37.	5 $\frac{3}{4}$	..
{ 1838* . . .	11.	36	..
,, Decrease .. . . .	..	..	1 $\frac{9}{10}$

The number of travellers from Antwerp in 1838 has somewhat

* After adding one-fifth for the last two months.

decreased, in comparison with the preceding year; but it must be observed, that at the first opening of a railway the novelty generally attracts a number of passengers, causing an excess in the first few months, and a subsequent falling off, which is not recovered until the line comes into full operation, and its benefits become generally felt and appreciated.

Table of the Number of Passengers booked at each Station on the Railways of Belgium in each Year since their opening.

STATIONS.	When opened.	Number of Travellers booked at each Station.			
		1835 8 Months.	1836	1837	1838 10 Months.
Mechlin . . .	. .	206,097	265,048	364,317	338,351
<i>Southern Line.</i>					
Brussels . . .	. .	215,342	370,152	391,428	443,284
Vilvorde . . .	November, 1836	..	9,436	83,727	68,042
		215,342	379,588	475,155	511,326
<i>Northern Line.</i>					
Antwerp . . .	May, 1836 . . .	..	226,671	300,920	245,999
Duffel . . .	November, 1837	..	..	5,075	53,147
		..	226,671	305,995	299,146
<i>Western Line.</i>					
Dendermond . .	January, 1837	..	..	92,841	67,449
Wetteren . . .	September „	..	..	16,835	35,945
Ghent . . .	„ „	..	..	40,162	165,163
Cappelle . . .	November „	..	..	2,817	29,557
Audeghem . . .	December „	..	..	639	13,785
Bruges . . .	August, 1838	..	..	..	31,153
Aeltre . . .	„ „	..	..	..	6,348
Landegem . . .	„ „	..	..	..	2,899
Blommendael . .	„ „	..	..	..	2,166
Ostend . . .	September, 1838	..	..	..	19,390
Jabbeke . . .	„ „	..	..	..	1,755
		..	..	153,234	375,610
<i>Eastern Line.</i>					
Louvain . . .	September, 1837	..	..	57,669	161,221
Tirlemont . . .	„ „	..	..	25,566	80,292
Haegt . . .	November „	..	..	1,594	19,052
Vertryck . . .	„ „	..	..	1,047	7,731
Waremmes . . .	April, 1838 . .	..	..	..	31,398
Ans . . .	„ „	..	..	..	80,507
Landen . . .	„ „	..	..	..	10,348
Fexhe . . .	„ „	..	..	..	6,637
		..	..	85,876	397,186
Total . . .		421,439	871,307	1,384,577	1,921,614

The months in which most travelling takes place in Belgium are August and September; the least occurs in January and February, as will be seen by the following aggregate of the number of passengers booked at Mechlin and Brussels, in each month, during three complete

years; at Antwerp during two years; at Ghent, Louvain, and four other stations during one year.

January . . .	173,189	July . . .	332,374
February . . .	164,661	August . . .	474,557
March . . .	218,802	September . . .	422,546
April . . .	261,026	October . . .	326,847
May . . .	323,878	November . . .	192,755
June . . .	352,924	December . . .	188,069

The receipts have already been stated. Of the amount in 1837, 680*l.* was received for extra baggage, of which only 20 kilogrammes, or 44 lbs. English, is allowed to each traveller; and in 1838, 3,338*l.* arose from the same source, and 1,768*l.* from the transport of merchandise. The rate of charge upon extra baggage and merchandise is the same, namely, from Brussels to Antwerp, a distance of 27½ miles, 1 fr. 60 c. per 100 kilogrammes, which is equivalent to 13*s.* 4¾*d.* per ton, or 5½*d.* per mile. The rate per mile by the London and Birmingham Railway is 6*s.* 6*d.* per cwt. for the whole distance, or nearly 1*s.* 2*d.* per mile for a ton, which, however, includes delivery and all charges except booking in London.

There is still another point in which the Belgian railways surpass those of this country, namely, evenness of motion; but it remains to be seen how far the carriage of heavy goods, which has only lately been commenced, will diminish this advantage. Mr. Loch, in a letter addressed to Lord Morpeth, and printed in the Appendix to the Irish Railway Report, says upon this point, that "the motion is much more equal and uniform on the Brussels Railway, and there is far less (I had almost said there is none) of that thumping which distinguishes the Greenwich, as well as the Liverpool Railway. The carriages are neater within, and better finished; and they have none of that disagreeable swinging motion which the English carriage has, and which is so much remarked upon. Coupled with this, the breakage of the rails amounts to nothing on the Brussels Railway, while it is so tremendous upon the Liverpool. Upon the former not above a dozen have been broken since it was opened (20 months), whereas the number upon the Liverpool amounted to 18 for the week ended 21st of January, 1837, and 12 for the week preceding. The velocities on each vary but little; the difference, however, is in favour of the Liverpool. The original rails on this road, and on the Brussels, are in weight nearly the same. The latter line has wooden sleepers throughout, and the road appears to have a certain degree of elasticity."

The velocity on the Belgian lines is, in general, from 26 to 30 miles an hour; which is diminished at the bridges, tunnels, stations, &c. These and the other necessary delays make the average rate 20 miles an hour.

The locomotive engines in use were manufactured by Mr. Stephenson, at Newcastle, and Mr. Cockerill, at Seraing: they are of different power, the diameter of their cylinders varying from 11 to 14 inches. They have generally only two driving-wheels, but a few have four: 28 carriages are fixed by law as the largest double train with two engines; from 14 to 18 as the number for a single engine.

There remains only to shew the nature of the expenses of working the lines, divided into the principal branches. The total expenditure

under this head, from the opening of the first line to the end of October, 1838, was 134,981*l.*, of which there was for—

Maintenance and Police of the Line . . .	£36,274 = 27 per cent.
Expenses of Carriage	76,379 = 57 „
„ Collection	22,328 = 16 „
Total . . .	£134,981

The accounts for the first ten months of 1838 enter more into detail, of which the following is an abridgment:—

Maintenance and Police:—	£.	
Wages of labour	13,856	
Materials	604	
Salaries	652	
	<hr/>	15,112
Expenses of Carriage:—		
Wages of labour	12,700	
Salaries	1,317	
Labour at coke furnaces . . .	696	
Materials for consumption . .	19,945	
„ repairs, &c.	3,518	
	<hr/>	38,176
Expenses of Collection:—		
Wages; transport of baggage .	1,742	
Salaries of officers	8,145	
Miscellaneous	1,592	
	<hr/>	11,479
Total	£64,767	

Among the materials for consumption, coal, coke, and wood amounted to the large sum of 17,520*l.*

As merchandise has not, until the past year, been admitted on the Belgian railways, their influence upon the traffic and commerce of that country cannot hitherto have been considerable. This further development is necessary to complete the system, and to enable us to judge of its full effects. Enough, however, has been advanced to demonstrate its plan and extent of operation—its prospects of success—its points of difference and of superiority in comparison with the system adopted in this country; and to afford some information which may be useful in the consideration of the important question as to how far it is desirable or expedient that Government shall interfere in the establishment of a general system of railways in Ireland. The objects to be desired in the formation of such a system are, first, the selection of the lines most advantageous to the country at large; and, secondly, the construction of the work at the cheapest rate consistent with its proper execution; the end aimed at is the extension of the traffic and communication of the country to the utmost limits of the public capabilities, at the lowest rate of charge at which the original outlay can be reimbursed. In the preceding statement a comparison has been drawn between the operation of a system undertaken by the Government, as in Belgium, and those of a system left to individual enterprise in this country. The result is certainly favourable to the former; it remains for others to determine how far a similar system is applicable to Ireland, and whether any circumstances exist in the condition of that country which would render its adoption inexpedient.

R.

PROCEEDINGS OF STATISTICAL SOCIETIES.

STATISTICAL SOCIETY OF LONDON.

Third Ordinary Meeting, Monday, 21st January, 1839.

G. R. PORTER, Esq. F.R.S., in the Chair.

A PAPER was read "On the Value of the Numerical Method as applied to Science, but especially to Physiology and Medicine," by W. A. Guy, M.B., Professor of Forensic Medicine, King's College. (See page 25.)

The following Candidates were elected Fellows of the Society:—

Greg, W. R., Esq., Manchester. | Rous, Hon. and Rev. Thomas M.

The following Gentlemen were elected Foreign Honorary Members:—

Professor Bache. | Colonel Forsell.
Professor Balbi. | M. Moreau de Jonnés.

It was announced that the Auditor appointed on the part of the Council to examine the Accounts for the past year was—

Edward Romilly, Esq.

and the two Gentlemen appointed on the part of the Fellows were—

J. V. C. Lever, Esq., and the Rev. George Weight.

The following Candidates for admission were proposed:—

The Right Hon. Sir Wilmot Horton, Bart.; John Robinson Maclean, Esq.;
Trevenen James, Esq.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rates of Duty on Foreign Wheat, during each Week of the Month of December, 1838; also the Average Prices during the Quarter ended Christmas, 1838, and during each of the Years 1837 and 1838.

	Weeks ended December,				Average of the Month.	Average of Quarter ended Christmas.	Average of Years.	
	7th.	14th.	21st.	28th.			1837	1838
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Wheat, Weekly Average .	75 6	73 4	73 4	73 2	77 7	72 6	55 10	64 7
„ Aggregate Average	73 0	74 6	75 5	76 1	74 9	..	..	..
„ Duty on Foreign .	1 0	1 0	1 0	1 0	..	..	..	..
Barley, Weekly Average .	34 5	36 2	36 10	37 5	36 2	33 9	30 4	31 5
Oats, „ „	25 1	25 5	25 10	26 3	25 7	23 11	23 1	22 5
Rye, „ „	43 9	48 8	50 6	52 6	48 10	41 4	34 9	35 1
Beans, „ „	40 6	41 10	41 10	40 11	41 2	40 3	38 7	37 2
Peas, „ „	44 5	43 9	44 1	43 8	43 11	42 8	37 6	36 8

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 11th December, 1838, and 8th January, 1839.

Quarters ended	Liabilities.			Assets.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
	£.	£.	£.	£.	£.	£.
11th December	18,469,000	9,033,000	27,502,000	20,707,000	9,362,000	30,069,000
8th January .	18,201,000	10,315,000	28,516,000	21,680,000	9,336,000	31,016,000

An Abstract of the Net Produce of the Revenue of Great Britain in each of the Years and Quarters ended 5th January, 1838 and 1839.

	Years ended 5th January,			
	1838	1839	Increase.	Decrease.
	£.	£.	£.	£.
Customs	18,826,284	19,154,729	328,445	..
Excise	11,794,338	11,864,114	69,776	..
Stamps	6,432,153	6,612,927	180,774	..
Taxes	3,677,748	3,654,818	..	22,930
Post-Office	1,517,743	1,525,000	7,257	..
Crown Lands . . . . .	..	170,000	170,000	..
Miscellaneous	34,936	50,947	16,011	..
Imprest Monies, Repay- ments, &c.	817,609	1,143,479	325,870	..
Total Income . . .	43,100,811	44,176,014	1,098,133	22,930

	Quarters ended 5th January,			
	1838	1839	Increase.	Decrease.
	£.	£.	£.	£.
Customs	4,523,278	4,854,388	331,110	..
Excise	3,590,864	3,627,190	36,326	..
Stamps	1,544,400	1,521,123	..	23,277
Taxes	1,579,028	1,586,689	7,661	..
Post-Office	376,000	365,000	..	11,000
Crown Lands . . . . .	..	40,000	40,000	..
Miscellaneous	174	6,340	6,166	..
Imprest Monies, Repay- ments, &c.	188,188	348,533	160,345	..
Total Income . . .	11,801,932	12,349,263	581,608	34,277

Total Increase on the Year, £1,075,203; total Increase on the Quarter, £547,331.

An Abstract of the Income and Charges of the Consolidated Fund in each of the Quarters ended 5th January, 1838 and 1839.

INCOME.			CHARGE.		
Description.	Quarters ended 5th January,		Description.	Quarters ended 5th January,	
	1838	1839		1838	1839
	£.	£.		£.	£.
Customs	3,629,709	3,750,032	Permanent Debt . . .	8,116,339	8,167,779
Excise	3,590,864	3,649,496	Terminable Annuities .	708,609	735,907
Stamps	1,544,400	1,521,123	Interest on Exchequer Bills	11,857	8,665
Taxes	1,579,028	1,586,689	Sinking Fund . . . . .	..	..
Post-Office	376,000	365,000	Civil List	203,076	96,410
Crown Lands . . . . .	..	40,000	Other Charges	471,673	518,197
Miscellaneous	273,284	354,873			
Total	10,993,285	11,267,213	Total Charges	9,511,604	9,466,958
Repayments of Issues out of the Consoli- dated Fund in Ireland }	150,000	..	Total Surplus	1,631,681	1,800,255
Total Income . . .	11,143,285	11,267,213	Total	11,143,285	11,267,213

JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

MARCH, 1839.

Report of a Committee of the Manchester Statistical Society, on the State of Education in the Township of Pendleton, 1838.

THE suburban township of Pendleton, forming a portion of the borough of Salford, and having a population of nearly 10,000 inhabitants, was selected by the Manchester Statistical Society for an examination to be carried on from house to house, with a view to ascertain by that process the actual amount of schooling obtained by the people, and, if possible, to gather some information as to the results of such instruction.

The Committee appointed to superintend this enquiry availed themselves of the opportunity which it afforded to repeat the examination of all the schools in the township, so as to be able to draw a comparison between their present state and that in which they were found about two years and a half previously, when the Report on the State of Education in the Borough of Salford was prepared.

The present enquiry occupied four months in the spring and summer of 1838.

The population of Pendleton, only about 6000 in 1821, had increased in 1831 to 8435. This great addition is ascribed, in the last population returns, to the introduction of flax-spinning and the extension of collieries. In August, 1837, the assessment of Pendleton shewed the following number and classification of dwellings:—

	Occupied.	Unoccupied.	Total.
Houses under £10 . . .	1,104	51	1,155
£10, and under £20 . . .	349	14	363
£20, „ „ £30 . . .	53	1	54
£30, „ „ £40 . . .	32	4	36
£40, „ „ £50 . . .	31	4	35
£50, and upwards . . .	138	3	141
	<hr/> 1,707	<hr/> 77	<hr/> 1,784
Cellar dwellings . . .	170	7	177
	<hr/>	<hr/>	<hr/>

Of the inhabited cellars, the Committee's agent has reported 166, and of the houses, 1548; leaving unaccounted for 4 cellars and 159 houses.

Not having taken account of the number of empty houses in his tables, the agent is unable to state precisely in numbers the cause of this difference. There were a few cases in which families were from home, or removing when the district was visited; and some few houses also

may have escaped being recorded from the irregular nature of the boundaries of the township, which covers an area of 1720 statute acres; but such omissions being insufficient to account for the difference between the return made to your Committee and the assessment, it is to be presumed that the number of unoccupied houses must have increased. This is the more credible, as the population recorded by the Committee's agent gives a higher average number to each dwelling than appears in the census of 1831. It is constantly remarked by those conversant with the habits of the poor, that the long-continued pressure of bad times has invariably the effect of congregating their masses in a smaller compass. At the period of this enquiry there had been a continuance of nearly two years of dull trade, and many of the working classes had consequently suffered much distress during the winter. This was particularly the case in those branches of industry least dependent upon the steam-engine,—such as the building trades, dyers, printers, bleachers, hand-loom weavers, &c., of whom a considerable number inhabit the township of Pendleton.*

To this circumstance, no doubt, may be in part attributed the falling off in the number of children attending the common and dame schools, compared with the former Report made two and a half years previously, as exhibited in Tables A and B. During this period there cannot have been an increase of fewer than 200 in the number of children in the township between five and fifteen years of age; and by reference to Table B, it will be seen that the day and evening scholars of that age have undergone a decrease of 135.

It will further be observed, by reference to Tables A and B, that there is a decrease of 62 in the total number of children attending day and evening schools in the township, notwithstanding an increase of 70 in schools supported by private individuals and public subscription, and of 74 in the superior schools.

One of the previously existing charity schools has been discontinued, but two new infant schools have been opened, one of which contains 140 children. There is a diminution of 65 scholars in the dame schools, of 114 in the common schools, and of 23 in the evening schools. It is chiefly in the girls, and in the ages between 5 and 15, that the falling off in numbers is found. The children under 5 have increased in the day schools. A few of the details shewn by the comparison of the two Returns are subjoined.†

The number of children attending the Sunday schools of the Dissenters and Roman Catholics has undergone hardly any change, but the

* The classification of trades, in Tables No. 2 and 3, shews a small proportion of factory hands, especially amongst the males. Employment in agricultural labour, not being so well paid as in the manufactures, is less sought after by the young; and it was remarked by one old inhabitant of the township, that few of the younger men are good spademen, the best being men about sixty years of age.

† The only superior boys' school in the township in 1835 has been discontinued, and of the two now existing one has superseded a girls' school.

One superior girls' school has been discontinued since 1835, and of two new ones now in operation one has been raised from a common school since the last inquiry. In one of the superior girls' schools, which is very well conducted, an acknowledgment was made of the valuable results obtained by acting upon hints given by the Society's agent while prosecuting the former inquiry.

school connected with St. Thomas's church has had an increase of 237 scholars. A new Church of England Sunday school has also been opened at Irlams-o'-th'-Height, with 150 scholars; but these cannot all be put down as an increase, since there were previously in existence, at the extremity of the village (but in an adjoining township), schools connected with Methodist chapels, at which most of these children have attended.

In the increase of Sunday scholars there is only one boy to every two girls; and indeed it is mainly upon the younger portion of the female population that these excellent institutions are exercising their powerful influence. In former Reports testimony has been borne to their value as vehicles of religious knowledge to the people, as well as the source of much that was valuable in training the manners and dispositions of the children. The attachment shewn, especially by the girls, to their schools and teachers is a strong indication of the moral influence of the system; but as means of secular instruction, these schools must not be viewed in too high a light. Several instances have, however, been met with in which most of what was known was attributed to the Sunday school, and many others where it had evidently been the means of keeping up and improving what had been previously acquired.*—*Vide* Tables No. 7 and 10.

A great number of the lower classes appear to forget very soon what

Neither of the common boys' schools, recorded in the first inquiry, exist as such now; one of them has dwindled into a dame school, in consequence of the master's ill health. The only common boys' school now is kept by the teacher of the charity school, reported above to have been discontinued.

There were formerly five common schools for girls, one (as was before mentioned) has risen to the rank of a superior school; the other four have ceased to exist, and the two now reported are new in the township.

One of the dame schools is kept by the wife of the former teacher of a common boys' school, and it is not a little illustrative of the unsettled character of the people, that only one of the eight dames met with in 1835 is now keeping school in the township, and she is not in her former abode. The remaining six dame schools are all new.

* 1. The family of a hand-loom weaver, who said he had found it impossible to give his children any time at a day school, had learned to read and write at a Sunday school, and the eldest girl had also gone a little way in accounts.

2. The wife of another hand-loom weaver, lamenting her inability to send her children to a day school, added, "they goon to Sunday schoo', and larn a deal o' good there."

3. The following pleasing testimony to the improving moral influence of Sunday schools was borne by the mother of a large family (chiefly daughters). On its being observed that the girls could not read, she replied, "They come but little on; but it makes 'em better lasses, and I would'nt let 'em stop at home at no rate."

4. The parents of a numerous family represented that they had made it a rule to give each child two years at a day school, and let them have a "full run" at Sunday school as long as they could get them to go.

5. A very intelligent old man, speaking of his children, (some of them grown up,) said, that though they went to day school as much as he could afford, yet he thought it would have done them little good had he not been careful to send them regularly to a Sunday school.

6. A youth, about fourteen years of age, who is learning calico-printing, stated, that though he was sent to a day school as much as his parents could afford, yet he believed it would have done him little good had he not been to a Sunday school since. He finds it useful in refreshing his memory, and he is also making progress.

they may have learned at school;* nor will this excite surprise when the imperfect nature of the instruction they receive in their early years is considered. This subject having been fully treated of in former Reports of the Society, will require but few remarks on the present occasion.† The fault does not by any means appear to lie exclusively in the general incapacity of the teachers; much must also be attributed to the extremely irregular attendance of the children. It operates as a serious drawback to the efficiency of infant schools; and in most of the charity schools, where regular books are kept, the same fact is proved, as well as the shortness of the time that the children remain at one school. In the humbler schools, supported solely by payments of the scholars, such registers are not kept, but the teachers join in the universal complaint; and whilst carrying on the present investigation, testimony upon this head has been obtained from the people themselves, some examples of which are subjoined.‡

In conversing with the parents and children on this subject, the

* A considerable number of persons stated that they were once able to read in the Bible, but had now forgotten it. This takes place, according to some, because they have "so mitch else to think about;" others consider that hard work drives it out of their heads; and one woman attributed her loss of learning to having had "such a big family." A hand-loom weaver, speaking in reference to his ability to read formerly, said, "I could say th' catechis fro' end to end, and ne'er look at book, but I cannot read now; I can only spell out words i' th' Testament, but cannot *expende* them, or summut o' that." A young woman, twenty-eight years of age, said she could have read in the Testament when young, but can only tell her letters now—cannot account for it, except that she has never tried to read for years. A crofter said he was at least three years at a day school, and could read the Bible, but has "quite forgotten how it's done now."

† 1. One youth said he had been to school, but what instruction he had had was not "gradely," for he could not say his letters.

2. A female, referring to her school-days, said they did not learn much, for "the mistress used to set the scholars agate o' peeling potatoes and fetchin water 'stead of setting them to read."

3. A man, who had attended a free school in Staffordshire, complained that the master took no trouble with the scholars, and hence he never learned to read properly:—"one lad teacht another all that was taught."

4. A labourer said he well remembered going to a dame school, where "the mistress used to hear him say his lessons, and strap him."

5. A mother stated that her daughter learned to write at a Sunday school, but believed she "ne'er got much good at a day school."

6. Another stated, respecting herself, that she went to a day school, but got no good of it, and learned afterwards to read in a Sunday school.

‡ 1. The wife of a dyer, mother of seven children, expressed herself thus:—"We senden them to school a bit, when we can afford it; but there's too many folk i' th' world—poor folk canna live, let alone clothing and larning. I canna, for shame, to let children go out, let alone going to school. But it's a weary thing when people canna read. It's a blessed fine thing to be a good scholar."

2. A hand weaver, of decent appearance and respectful deportment, remarked that he had found it impossible to send his children to day school at all regularly, work having been uncertain, and wages low. He regretted this much, but observed that he had kept them at Sunday school as punctually as he could; but sometimes, with his utmost efforts, he had been unable to provide them with decent clothing, for this purpose, and they had been detained at home in consequence.

Many parents stated the effect of this irregularity of attendance to be, that in the periods of non-attendance the little they have learned is lost.

3. A mother stated, respecting her boy, that he had gone to school for four years, "back'ards and for'ards," but that he could not read in the spelling-book.

agent found that out of 2657 cases of minors, who either were then or had been formerly at day or evening schools, he could learn nothing satisfactory respecting 716. Of the remaining 1941, 665 were acknowledged to have been very irregular in their attendance; while, of 1276, or two-thirds, a more favourable report was made.

Out of the number of 665, who were acknowledged to have been irregular in attendance at school, no reason was assigned in the case of 152; but for the remaining 513 the following causes were pleaded:—

Natural infirmity, or ill health	in	30	cases.
Loss of parents	,,	39	,,
Neglect of parents	,,	66	,,
Employment of nursing, or other tasks	,,	113	,,
Poverty of parents	,,	265	,,

This last plea embracing 10 per cent. of the entire number of minors who are or have been at school.

The expense of providing decent clothing comes largely, no doubt, into this head, and probably is a more important consideration than the small weekly payment to the master; yet in one school, entirely supported by a lady, and where clothing is given, the complaint of irregular attendance was equally made.

The impediments which prevent the existing means of instruction from being made more effective require to be more minutely investigated than has hitherto been done, since they are difficulties which will stand in the way of every attempt to diffuse and improve education. In the present enquiry, besides the plea of poverty and the temptation to send children early to work, we find recorded many cases of neglect on the part of parents, probably often arising from their own ignorance;* but some were met with who, though they had had school instruction

4. A family of eight were stated to have gone to school "by bits and snatches," owing to the father having been frequently out of work, and the consequence was that they had learned nothing.

5. Others were said to go to school at "offs and ons," or, "nows and thens;" and one went "odd days and half days," until the parents took the child away, being unwilling to pay full-price for only half-time.

6. A female, speaking of her own opportunities, remarked, "I never went to schoo' so mitch as to keep me i' larning—cannot tell how it wur—think it was neglect."

7. Another person observed, "she never sent her children to schoo' but when she could find *nout* better for 'em to do."

8. A man, who was working half-time, being asked whether a child, who was assisting in the house, had finished her education, replied, "I've had a hard farm of it, but I intend to give her a good summer's schooling, if she can be spared half-a-day."

* 1. One person, who was unable to read, being asked how it happened, replied, "I gaed to wark when I should ha gaen to schoo'."

2. Another said, "Weaving is too poor a trade to get schooling out of it."

3. A third observed, "I never had the privilege of goeing to a war'-day school—it's nine or ten o'clock afore I've done o' nights, or I'd soon ha' a bit o' writing in my fingers."

4. A hand-loom weaver being asked respecting his attainments, said he had "no chance for learning" when he was young, and he thought there was as little chance for poor folk now—then there were no schools, and now there is no money."

5. The wife of a dyer remarked she had not time to think about schooling for her children—all she thought of was "to bring 'em to do *summut* to get a living."

themselves, professed not to see wherein they had been benefited by it; and though it was evident that the infant school was gradually gaining favour, yet the peculiar training which mainly creates the value of the system was rarely appreciated.*

Amidst much of apathy and ignorance, it is cheering to find occasional examples of a contrary character. Some parents, uneducated themselves, seem so impressed with the disadvantages under which they have consequently laboured, that they spare no pains, and exercise great self-denial, in endeavouring to give the best education within their reach to their own offspring, and in a few instances they appear to have toiled hard themselves to make up for the neglect they had suffered in their youth.†

The evening schools are generally frequented by older pupils than are found in day schools, who attend, after the conclusion of their work, from an eager desire of improving themselves. These schools are usually more numerous filled in winter than in summer. Many are altogether closed during the latter season.

6. One girl was represented as "running ar'nds, and doing jobs i'th' house," but the mother thought of sending her to school three days a week, in summer, if she could be spared.

7. Speaking to a woman, respecting her son, who was at work, but could not read, and enquiring how it happened, she replied, "He would not go to schoo' when young, so, to punish him, I let him have his own way, and he rues it now."

8. Another parent sent her children to school awhile, but took them away because they played truant.

9. The mother of a large family of boys was asked why the youngest lad, eight years of age, was not at school, and answered, "I used to send him, but these t'other hobgoblins (meaning her elder sons) 'tices him off."

10. One man observed with much simplicity—"I was put to wark when I should ha' gotten my bit o' larning."

Girls, however, probably suffer more from this cause than boys do, as they are more useful in-doors, and make better nurses. Many a young girl was pointed out by her mother as being too useful to be spared to go to school. Some parents do this without regret, while others seem much grieved to be compelled to sacrifice the interests of their children to present necessities.

11. A woman of the former class, expressed her disapprobation of the Factory Bill, as did a few others. "It's very hard," said she, "folk mun ha' so many children to keep 'em when they munnot work."

12. Another person, of the same description, observed, "That they (viz., the parents) never went to school, and therefore they were not bound to give the children more than they received themselves."

* 1. A woman, speaking of her boy, four years' old, stated that she had sent him to the infant school, "but she did not like their goings-on. They are all for play, and I wish him to learn something. Infant schools are very ready to take children out of their parents' way while they does their work."

2. Another female said she had sent her child a few times, but had taken her away again, and should like to send her "to a gradely school, where they teach 'em summut."

3. A collier's wife said she had taken her child away, adding, "So how long they goon to this infant schoo' they do no larn nothin."

† 1. Among the few who never attended school, and who can read, was one woman, who gave the following account of the way in which she learned:—"I took larning up o' mysel, when I went to a printing-shop (calico-printers), and a mon tout me, and then I bout up histories and books as was nice reading."

2. An elderly man, who had lately learned to read, related the manner in which he accomplished his point, thus:—"I geet no schooling when I wur a lad, but arter I wur married I geed among't religious folk at Tinley, and geet a bit o' neet schooling; so I can read i'th' Testament. I mean to have another stir at it this summer."

The district embraced in the present enquiry is not of sufficient extent to give, from a mere visitation of schools, the information that would lead to accurate conclusions as to the proportion of the population under instruction. By the visitation made from house to house, however, 1287 minors were found to be attending school more or less regularly, being 104 more than were reported by the teachers of the schools existing in the township. Some of this latter number attended the Manchester Free Grammar School, other charity schools in Salford, and establishments in the adjacent townships.*

The total number of day and evening scholars, and of those reported to be receiving regular instruction at home, appears to be 13·7 per cent. of the entire population; and, taking the ages between 5 and 15, about one-half are found not to be receiving any daily instruction. The school enquiry in the borough of Salford, in 1835, shewed about 6-10ths of the children of these ages not attending day or evening school; and in that Report the number receiving instruction at home was not ascertained.

Of those minors who are not resident with their parents in Pendleton, there are 70 males and 102 females; 33 of the former and 29 of the latter are under instruction.† Of the remainder, most of the males are apprentices to some trade, or servants; and the majority of the females are in service, few being apprenticed to any business.

* Pendleton:—	1835	Per-Centage of the Total Population, estimated at 8700.
Attend day and evening school <i>only</i> . . .	364	4·19
Attend <i>both</i> day and Sunday school . . .	896	10·30
	1,260	14·49
Attend Sunday school <i>only</i>	790	9·08
Total . . .	2,050	23·57

N.B. The total of the borough of Salford in that year gave—

Day scholars . . .	11·90 per cent.
Sunday scholars . . .	11·53 „
Total . . .	23·43

Pendleton:—	1838	Per-Centage of the Total Population, estimated at 9600.
Attend day and evening school <i>only</i> . . .	518	5·40
Attend <i>both</i> day and Sunday school . . .	680	7·08
	1,198	12·48
Attend Sunday school <i>only</i>	1,402	14·60
Total . . .	2,600	27·08

† Of this number one boy was at the Manchester Blue-coat School; one girl at the Jubilee School; and one girl at the Deaf and Dumb School:—two boys and one girl were with relations at a distance, but attended day schools; and thirty boys and twenty-six girls were at boarding schools out of the township.

In examining the Tables appended to this Report, a few observations of some interest present themselves which have not been alluded to in the preceding general observations. Amongst these is the very small number of Irish domiciled in the township. They appear to constitute not more than 2 to 3 per cent. of the entire population; whilst, in the working population of the two boroughs of Manchester and Salford, they were found to be 16 per cent. This is probably attributable to the circumstance of its not having been the practice in Pendleton to give relief to the Irish out of the poor-rate, as has been usual in Manchester.

In Table No. 2, the small proportion of Irish employed on the hand-loom affords also a striking contrast with what occurs in Manchester.* In this and the following Table the large proportion of females employed in particular trades is worthy of observation; while, of minors between 10 and 21 years of age, 60 per cent. are shewn to be earning wages, viz., 44 per cent. of those from 10 to 15, and 76 per cent. of those between 15 and 21. The proportion borne by the domestic servants to the total population has much increased since the census of 1831, which is an evident proof of the rising wealth of the township.†

Tables Nos. 4, 5, and 6, enter with great minuteness into the nature of the schooling given to the minors, and No. 4 gives also a summary of the same in respect to adults. From these Tables it would appear, that of the rising generation very few are left entirely without instruction, probably not more than $2\frac{1}{2}$ to 3 per cent. Far different it must have been formerly, since, of the adult population, 8 per cent. acknowledged their education to have been totally neglected.

The vast extension of the Sunday-school system is shewn in the fact, that of all the persons, the nature of whose past or present schooling has been ascertained, only 22 per cent. have not been Sunday scholars.

* Of 338 adult hand-loom weavers and winders only 4 were Irish, while, in Manchester, probably nearly half of the adult weavers belong to that country. By a return obtained in the autumn of 1838, from 74 houses containing looms in Miles Platting, Manchester, it appears that 31 houses contained 51 looms, worked by members of the family; and that in 43 houses, containing 137 looms (127 of which were in work), 41 were worked by members of the family, and 86 by journeymen: of these 86, 44 were English, 41 Irish, and 1 Scotch.

† The domestic servants, recorded at the census in 1831, out of a total population of 8435, were—

Adults	66
Minors	14
<hr/>	
Males	80
Females	397
<hr/>	

In the present enquiry, the total population being 9542, there are found to be—

Adults	119
Minors	15
<hr/>	
Male domestic servants	134
<hr/>	
Female	534
<hr/>	

From the large proportion recorded as having received day-school instruction, compared with the relatively small number found in the schools at any given time, we have proof of a very short period being so devoted on the average. Of the children who have left school, one-third appear only to have remained there above five years; and of the other two-thirds who remained less than five years at school, one-half were there less than three years. Of course, there were no means of testing the accuracy of the report made by these parties; but wherever anything in these statements threw upon their report the slightest suspicion of inaccuracy, the cases have been classed as not ascertained.

Table No. 7 gives an account of the acquirements of the people under the four heads of reading, writing, cyphering, and sewing, and the means by which they have been attained; and the three following tables present a more minute classification of the minors.

Under the head of adults it is curious to observe, that of those who cannot read more *have* attended school than *have not* done so. About half of those who can read can write also, but not quite one-third can cipher.

In the case of the acquirements the agent was frequently able to test the accuracy of the report, and did so whenever the opportunity occurred; but on many subjects it must be evident that he was obliged to take the mere report of the parties themselves, or of their relations. He bears testimony to the general willingness shewn to supply the information he required, as soon as the first suspicions excited in the district by so unusual a visitor had subsided. At the houses of the rich it was not always easy to obtain even the few essential points necessary to complete, with accuracy, the tables of number and age; but, from the poor, respect and civility were almost always experienced, and the opportunities afforded of verifying their statements, with few exceptions, proved their accuracy.*

Even amongst the poorest and least instructed classes there was found a good deal of intelligence, and often strong natural sense, which, if judiciously cultivated, and accompanied with steady habits, could hardly have failed to raise materially their condition.

As to the *ordinary* physical condition of the people it would be difficult to draw any general conclusions, having visited them at the close of a season of extraordinary severity, during a great part of which many of the adults had been out of work, and others had worked only short-time. Even were their habits more provident than they are generally considered to be, they must necessarily have been exposed to much suffering under the circumstances of the times.

The cellars, and the poorer class of houses, were found very badly ventilated, and even such imperfect means as existed were rarely used. In some cases the number of persons sleeping in one room, besides being unhealthy in the extreme, is decidedly repugnant to decency.

Although the nature of the ground throughout the township appears to afford every facility for the purpose, yet the drainage is of the most

* One of the few who attempted deception, having said he could read, a book was placed before him, and he was asked if he could make it out, to which he replied, "I could read when I *wur* at *schoo*", but I canna read now."

imperfect kind—in many places neglected in a very disgraceful manner. This is a subject which ought to be taken up without delay by the inhabitants, as, with such a rapidly increasing population, the evil may prove of the utmost detriment to the public health. This, however, is only one branch of municipal improvement strangely neglected in such a district (forming as it does an integral portion of a town-community of from 250,000 to 300,000 souls, second to none in industry and wealth.) Lighting by gas has only been introduced in the streets during the present year, and is still confined to the main line of high road, while the township supplies no night-watch, and only pays one solitary constable.

In conclusion, the Committee beg to recapitulate the most important points ascertained in this enquiry, some of which have not been elicited by the previous investigations of the Society, though all are confirmatory of the statements made in their former Reports.

I. That of the children of a suitable age to go to school little more than one-half (or about 13 per cent. of the entire population) are to be found attending school at any one time.

II. That not more than 2 to 3 per cent., however, of the juvenile population are at present left entirely destitute of instruction, whilst of the surviving adult population 8 per cent. represent their education to have been totally neglected.

III. That not more than $1\frac{1}{2}$ per cent. of the population are receiving education at home.

IV. That of the children who go to school, one-third appear to remain less than three years; one-third from three to five years; and one-third remain above five years.

V. That the humbler schools are ephemerical and inefficient; and that at least one-half of the children of the working classes are exceedingly irregular in their attendance at school.

VI. That the schooling of a large proportion is attended with little or no practical benefit, from the imperfect nature of such an education, and the subsequent neglect which causes their slender acquirements to be soon forgotten.

VII. That this would be the case to a much greater extent, were it not for Sunday schools, which afford the opportunity of keeping up what has been previously acquired, and, in some instances, aid the children to make further progress.

VIII. That, to this extent, we are justified in considering the Sunday schools to be means of secular instruction; while their primary object, and most important result, must ever be found in their moral and religious influence upon the population.

TABLE A.

DESCRIPTION OF SCHOOLS.	1835		1838	
	Schools.	Scholars.	Schools.	Scholars.
Sunday schools: Church of England . . .	2	399	3	786
Roman Catholic . . .	1	113	1	149
Dissenters	3	1174	3	1147
Total	6	1686	7	2082
Returned also as day and evening scholars .	..	896	..	680
Receiving Sunday school tuition only . .	..	790	..	1402
Day schools: Dame	8	228	8	163
Common	7	224	3	110
Superior.	5	87	7	161
Supported solely by the scholars. . .	20	539	18	434
Infant schools assisted by the public. . .	1	65	2	206
Other charity schools, &c.	6	553	6	478
Total	27	1157	26	1118
Evening schools supported by the scholars .	5	79	3	52
Charity, &c.	1	24	1	28
Total	6	103	4	80
Total number of schools and scholars . .	39	2050	37	2600
Evening schools attached to Sunday schools	..	..	1	22

TABLE B.—Ages and Sexes of Scholars in 1835 and 1838.

DESCRIPTION OF SCHOOLS.	AGE.						SEX.			
	1835			1838			1835		1838	
	Under 5.	Between 5 & 15.	Above 15.	Under 5.	Between 5 & 15.	Above 15.	Males.	Females.	Males.	Females.
Sunday schools:										
Church of England . . .	22	343	34	61	592	133	175	224	364	422
Roman Catholic . . .	2	84	27	19	111	19	56	57	68	81
Dissenters	50	975	149	120	917	110	583	591	508	639
Total of Sunday scholars	74	1402	210	200	1620	262	814	872	940	1142
Day schools, not gratuitous:										
Dame schools	49	179	..	52	111	..	69	159	76	87
Common schools . . .	26	193	..	19	91	..	93	131	74	36
Superior schools . . .	6	73	8	9	134	18	15	72	38	123
Total	81	450	8	80	336	18	177	362	188	246
Charity day schools:										
Infant schools	17	48	..	70	136	..	20	45	91	115
Other charity schools, &c.	51	502	..	31	422	25	280	273	247	231
Total of day scholars .	149	1000	8	181	894	43	477	680	526	592
Evening schools, not gra- tuitous . . . . .	..	56	23	..	23	29	65	14	45	7
Ditto, charity, &c. . .	..	24	..	..	28	..	6	18	8	20
Total of evening scholars	..	80	23	..	51	29	71	32	53	27
Evening school attached to Sunday school . . .	..	..	..	..	14	8	..	..	10	12

TABLE I.—*Age, Sex, and Country of the Population.*

Dwellings.	Country of the Heads of Families.					Adults, above 21.	Minors, under 21.	Resident Popu- lation.	Non-resident Minors, Children of Resident Heads of Families.
	English.	Welsh.	Irish.	Scotch.	Total.				
Houses . .	1452	39	34	20	1546*	4567	4066	8633	163
Cellars . .	154	8	6	..	168	362	355	717	8
Chambers .	31	2	2	..	35	101	91	192	1
Total .	1637	49	42	20	1749	5030	4512	9542	172

* Including one foreigner.

The lodgers are not distinguished in this Table; but are included in the numbers, according to the class to which they belong.

TABLE II.—*Occupation of Adults.*

OCCUPATION.	COUNTRY.						SEX.	
	English.	Welsh.	Irish.	Scotch.	Foreigners.	Total.	Males.	Females.
Domestic servants	491	1	4	1	..	497	119	378
Agricultural and other out-door employments ^a	369	13	22	1	..	405	403	2
Factory hands	314	7	21	..	..	342	132	210
Dyers, bleachers, and calico printers	326	2	11	..	..	339	334	5
Hand-loom weavers and winders ^b	332	..	4	2	..	338	191	147
Others employed at home ^c . .	325	2	6	..	1	334	24	310
Mechanics and handicrafts ^d . .	199	7	5	8	..	219	219	..
Building trades ^e	160	7	8	4	..	179	178	1
Clothing trades	154	1	7	2	..	164	122	42
Retailers and agents ^f	156	..	1	3	..	160	130	30
Merchants and professional men	137	..	..	1	..	138	137	1
Colliers	83	12	2	..	..	97	95	2
Clerks and warehouse hands . .	68	..	..	1	..	69	68	1
Retail brewers	37	..	..	2	..	39	21	18
Hackney coachmen	24	..	1	..	..	25	25	..
Miscellaneous ^h	20	..	..	2	..	22	20	2
Licensed victuallers	7	..	..	..	..	7	6	1
Total employed in business . .	3202	52	92	27	1	3374	2224	1150
Not employed in business ⁱ . .	1506	42	37	21	1	1607	29	1578
Not ascertained	47	1	..	1	..	49	47	2
Total	4755	95	129	49	2	5030	2300	2730

^a Including farming men, labourers, gardeners, boatmen, watchmen, and carters.

^b Of this number, 289 are weavers, and 49 are winders; 42 of the winders are females, and 7 are males; 184 weavers are males, and 105 are females.

^c Persons having some occupation at home, distinct from mere household duties, are classed under this head.

^d Blacksmiths, upholsterers, engravers, ropers, packers, block-cutters, wheelwrights, letter-press printers, &c., are included in this class.

^e Comprising carpenters, bricklayers, sawyers, plumbers, slaters, glaziers, and hodmen.

^f Including tailors, milliners, dress-makers, shoemakers, and bonnet-makers.

^g Shopkeepers, stewards, accountants, and overlookers of collieries, are arranged under this head.

^h In this class are comprised constables, policemen, toll-gate keepers, postmen, taskmasters, reporters, and overseers.

Of the persons who are not employed in business, 1578 are females.

A stonemason,

ⁱ A wholesale brewer,

TABLE III.—Occupation of Minors.

OCCUPATION.	AGE.					SEX.	
	Under 5 Years.	5 and under 10 Years.	10 and under 15 Years.	15 and under 21 Years.	Total.	Males.	Females.
Domestic servants . . . . .	..	5	39	127	171	15	156
Agricultural and other out-door employments . . . . .	..	3	18	45	66	64	2
Factory hands . . . . .	..	3	159	195	357	140	217
Dyers, bleachers, and calico printers	1	11	72	74	158	125	33
Hand-loom weavers and winders ^a .	..	4	29	48	81	32	49
Others employed at home . . . . .	..	3	21	57	81	24	57
Mechanics and handicrafts . . . . .	..	3	21	54	78	77	^b 1
Building trades . . . . .	..	..	6	30	36	36	..
Clothing trades . . . . .	..	..	2	39	41	12	29
Merchants and professions . . . . .	..	..	..	12	12	12	..
Colliers . . . . .	..	3	29	32	64	61	3
Clerks and warehouse hands . . . . .	..	..	6	31	37	36	1
Hackney coachmen . . . . .	..	..	..	1	1	1	..
Employed in shops, or in going errands . . . . .	..	1	36	17	54	53	1
Total employed in business	1	36	438	762	1237	688	549
Not employed in business	1316	1091	579	226	3212	1415	1797
Not ascertained	6	16	24	17	63	58	5
Total	1323	1143	1041	1005	4512	2161	2351

^a Of this number 52 are weavers, and 29 are winders; of the weavers, 32 are males, and 20 are females; and of the winders, 2 are males, and 27 are females.

^b A roper.

The same classification has been observed in this as was adopted in the preceding Table.

TABLE SUPPLEMENTAL TO II. AND III.—Shewing the Number of Married Females whose Daily Occupation requires them to be absent from Home during the Hours of Labour.

	Married Females having						Total.
	1 Child.	2 Children.	3 Children.	4 Children.	5 Children.	6 Children.	
The eldest child being—							
Under 5 years of age	16	4	1	..	..	..	21
5 and under 10 years of age	4	5	4	2	..	..	15
10 and under 15 years of age . . . . .	..	4	1	7	3	1	16
15 and under 21 years of age	3	2	7	4	1	1	18
Adult . . . . .	..	..	..	..	1	..	1
Total having children	23	15	13	13	5	2	71
Not having children							21
Total							92

There are 9 families in which 1 child works; 7 in which 2 children work; 7 in which 3 children work; and 1 family in which 5 children work.

Of the females included in this Table there are, factory hands, 82; charwomen, 8; calico-printer, 1; co lier, 1; total, 92. The charwomen are not constantly employed.

TABLE V.—*Length of Time which Minors now at Day or Evening Schools have attended.*

AGE.	Less than $\frac{1}{4}$ of a year.	$\frac{1}{4}$ and less than $\frac{1}{2}$ a year.	$\frac{1}{2}$ and less than 1 year.	1 and less than 2 years.	2 and less than 3 years.	3 and less than 4 years.	4 and less than 5 years.	5 years and upwards.	Time at School not ascertained.	Total now at School.	Regularly instructed at home.	Have been or are at Sunday School only.	Not now attending any School.	Not ascertained.	Total.
Under 5 years .	40	34	49	39	4	..	..	..	11	177	25	18	1101	2	1323
5 and under 10 .	20	33	43	126	144	142	111	64	76	759	52	104	223	5	1143
10 and under 15 .	1	3	3	9	23	11	28	176	55	309	26	97	596	13	1041
15 and under 21 .	..	1	1	7	8	1	1	7	16	42	19	130	610	204	1005
Total . .	61	71	96	181	179	154	140	247	158	1287	122	349	2530	224	4512

The majority of those who are now at a day school also attend a Sunday school.

TABLE VI.—*Length of Time which Minors not now at Day or Evening Schools have formerly attended.*

AGE.	Less than $\frac{1}{4}$ of a year.	$\frac{1}{4}$ and less than $\frac{1}{2}$ a year.	$\frac{1}{2}$ and less than 1 year.	1 and less than 2 years.	2 and less than 3 years.	3 and less than 4 years.	4 and less than 5 years.	5 years and upwards.	Time at School not ascertained.	Total not now at School.	Regularly instructed at home.	Now at School.	Have been, or are now at Sunday School only.	Have never been instructed.	Not ascertained.	Total.
Under 5 years .	..	4	..	4	..	..	..	..	19	27	25	177	18	1074	2	1323
5 and under 10 .	1	2	7	45	35	18	8	2	68	186	52	759	104	37	5	1143
10 and under 15 .	..	10	17	46	88	73	91	136	111	572	26	309	97	24	13	1041
15 and under 21 .	..	1	..	23	65	64	83	206	143	585	19	42	130	25	204	1005
Total . .	1	17	24	118	188	155	182	344	341	1370	122	1287	349	1160	224	4512

The majority of those who have attended day or evening schools have also attended, or are now attending, Sunday schools.

TABLE VII.—*Education and Acquirements of the Population.*

AGE.	Total.	Acquirements not ascertained.	Total Acquirements ascertained.	READING.			WRITING.			CIPHERING.			SEWING.		
				Able to Read.	Barely able to Read.	Cannot Read.	Able to Write.	Barely able to Write.	Cannot Write.	Able to Cipher.	Barely able to Cipher.	Cannot Cipher.	Able to Sew.	Barely able to Sew.	Cannot Sew.
Minors—															
Under 5 years	204	..	204	2	12	190	..	..	204	..	..	204	..	1	203
5 and under 10	945	2	943	326	255	362	99	36	808	30	18	895	144	38	761
10 and under 15	881	14	867	612	166	89	278	59	530	137	20	710	309	17	541
15 and under 21	627	15	612	467	83	62	250	37	325	149	3	460	319	..	293
Total at day or evening school *	2657	31	2626	1407	516	703	627	132	1867	316	41	2269	772	56	1798
Under private instruction	122	122	..	..	..	..	..	..	..	..	..	..	..	..	..
At Sunday school <i>only</i>	349	..	349	108	84	157	58	25	266	1	..	348	60	4	285
Never attended school	1160	..	1160	2	1	1157†	..	..	1160	..	..	1160	..	..	1160
Not ascertained	224	224	..	..	..	..	..	..	..	..	..	..	..	..	..
Total minors	4512	377	4135	1517	601	2017	685	157	3293	317	41	3777	832	60	3243
Adults—															
Attended day school	4350	18	4332	3796	215	321	2000	100	2232	1303	40	2989	2132	56	2144
Never attended day school	405	..	405	35	55	315	5	1	399	1	..	404	95	2	308
Attendance at School not ascertained	275	269	6	6	..	..	6	..	..	5	1	..	..	..	6
Total	9542	664	8878	5354	871	2653	2696	258	5924	1626	82	7170	3059	118	5701‡

* Of this number 1741 have also attended a Sunday school, and many of them for a long period.

† The bulk of these are under 5 years of age. ‡ Of course the bulk of these are males.

TABLE VIII.—*Schooling and Acquirements of Minors under 5, and from 5 to 15 Years of Age.*

TIME AT SCHOOL.	Total.	READING.			WRITING.			CIPHERING.			SEWING.		
		Able to Read.	Barely able to Read.	Cannot Read.	Able to Write.	Barely able to Write.	Cannot Write.	Able to Cipher.	Barely able to Cipher.	Cannot Cipher.	Able to Sew.	Barely able to Sew.	Cannot Sew.
<i>Minors under 5 Years of Age.</i>													
Less than $\frac{1}{4}$ of a year . . .	40	..	1	39	..	..	40	..	..	40	..	..	40
$\frac{1}{4}$ and less than $\frac{1}{2}$ a year . . .	38	..	2	36	..	..	38	..	..	38	..	..	38
$\frac{1}{2}$ and less than 1 year . . .	49	..	..	49	..	..	49	..	..	49	..	..	49
1 and less than 2 years . . .	43	1	8	34	..	..	43	..	..	43	..	..	43
2 and less than 3 years . . .	4	1	..	3	..	..	4	..	..	4	..	..	4
Above 3 years . . .	..	..	..	..	..	..	..	..	..	..	..	..	..
Time not ascertained. . . .	174	2	11	161	..	..	174	..	..	174	..	..	174
	30	..	1	29	..	..	30	..	..	30	..	1	29
Total	204	2	12	190	..	..	204	..	..	204	..	1	203
<i>Minors from 5 to 15 Years of Age.</i>													
Less than $\frac{1}{4}$ of a year . . .	21	..	1	20	..	..	21	..	..	21	..	..	21
$\frac{1}{4}$ and less than $\frac{1}{2}$ a year . . .	35	1	4	30	..	..	35	..	..	35	..	1	34
$\frac{1}{2}$ and less than 1 year . . .	50	1	2	47	..	..	50	..	..	50	..	1	49
1 and less than 2 years . . .	171	13	52	106	..	1	170	..	..	171	5	8	138
2 and less than 3 years . . .	179	39	78	62	2	11	166	..	..	179	24	11	144
3 and less than 4 years . . .	160	71	72	17	7	7	146	..	..	160	39	14	107
4 and less than 5 years . . .	119	87	21	11	24	10	85	..	..	117	33	3	83
5 years and upwards . . .	66	51	14	1	24	6	36	7	3	56	27	..	39
Time not ascertained . . .	801	263	244	294	57	35	709	9	3	789	128	38	65
	144*	63	11	68	42	1	99	21	15	106	16	..	126
Total	945	326	255	362	99	36	808	30	18	895	144	38	761

* No information was obtained respecting the acquirements of 2 of this number.

TABLE IX.—*Schooling and Acquirements of Minors from 10 to 15, and from 15 to 21 Years of Age.*

TIME AT SCHOOL.	READING.			WRITING.			CIPHERING.			SEWING.		
	Able to Read.	Barely able to Read.	Cannot Read.	Able to Write.	Barely able to Write.	Cannot Write.	Able to Cipher.	Barely able to Cipher.	Cannot Cipher.	Able to Sew.	Barely able to Sew.	Cannot Sew.
<i>Minors from 10 to 15 Years of Age.</i>												
Less than $\frac{1}{2}$ of a year . . .	1	1	..	..	..	1	..	..	1	..	..	1
$\frac{1}{2}$ and less than $\frac{1}{2}$ a year . . .	..	6	3	..	..	13	..	..	13	3	..	10
$\frac{1}{2}$ and less than 1 year . . .	13	8	7	1	..	19	..	..	20	6	1	13
$\frac{1}{2}$ and less than 2 years . . .	20	5	..	2	1	52	..	..	53	16	4	35
1 and less than 2 years . . .	55	15	13	9	1	93	1	1	110	32	3	76
2 and less than 3 years . . .	111	40	17	9	9	74	1	..	83	33	3	48
3 and less than 4 years . . .	84	29	7	7	3	79	1	..	110	57	1	61
4 and less than 5 years . . .	119	14	8	27	13	79	3	6	110	61	1	190
5 years and upwards . . .	312	297	3	201	29	82	103	13	196	118	4	..
	715	520	58	247	55	413	109	20	586	265	16	434
	166*	92	31	31	4	117	28	..	124	44	1	107
Time not ascertained . . .	..	..	..	..	..	..	..	..	..	..	..	..
Total . . .	881	612	89	278	59	530	137	20	710	309	17	541
<i>Minors from 15 to 21 Years of Age.</i>												
Less than $\frac{1}{2}$ of a year . . .	..	..	..	..	..	..	..	..	..	..	..	..
$\frac{1}{2}$ and less than $\frac{1}{2}$ a year . . .	2	1	..	..	..	2	..	..	2	1	..	1
$\frac{1}{2}$ and less than 1 year . . .	1	1	..	..	..	1	..	..	1	1	..	..
$\frac{1}{2}$ and less than 2 years . . .	30	8	3	2	3	25	2	..	28	8	..	22
1 and less than 2 years . . .	73	13	10	15	2	56	2	..	71	26	..	47
2 and less than 3 years . . .	73	50	17	9	2	54	2	..	63	30	..	35
3 and less than 4 years . . .	65	44	4	17	2	50	4	..	60	40	..	40
4 and less than 5 years . . .	84	67	6	17	17	50	4	..	122	44	..	123
5 years and upwards . . .	213	212	..	151	11	51	88	3	..	90	..	..
	468	393	23	194	35	239	98	3	367	200	..	268
	159†	74	39	56	2	86	51	..	93	119	..	25
Time not ascertained . . .	..	..	..	..	..	..	..	..	..	..	..	..
Total . . .	627	467	62	250	37	325	149	3	460	319	..	293

* No information was obtained respecting the acquirements of 14 of this number.

† No information was obtained respecting the acquirements of 13 of this number.

TABLE X.—Acquirements of Minors, with the Length of Time they have attended School.

LENGTH OF TIME.	Total	Acquirements not ascertained.	Acquirements ascertained.	READING.		WRITING.		CIPHERING.		SEWING.	
				Able to Read.	Cannot Read.	Able to Write.	Barely able to Write.	Able to Cipher.	Cannot Cipher.	Able to Sew.	Cannot Sew.
<i>At Day or Evening School.</i>											
Less than $\frac{1}{4}$ of a year . . .	62	..	62	..	3	..	..	..	62	..	62
$\frac{1}{4}$ and less than $\frac{1}{2}$ a year . . .	88	..	88	*13	69	..	..	..	88	1	83
$\frac{1}{2}$ and less than 1 year . . .	120	..	120	6	11	..	..	..	120	7	111
1 and less than 2 years . . .	299	..	299	48	95	4	5	3	290	29	258
2 and less than 3 years . . .	367	..	367	144	131	26	22	3	319	82	271
3 and less than 4 years . . .	309	..	309	163	118	28	12	3	306	102	190
4 and less than 5 years . . .	322	..	322	251	46	68	40	9	307	134	184
5 years and upwards . . .	591	..	591	560	27	376	46	19	374	235	352
Time not ascertained . . .	499	31	468	229	72	129	7	100	332	179	257
Total at day or evening school + . . .	2657	31	2626	1407	516	627	132	316	1867	772	1798
At Sunday school only . . .	349	..	349	108	84	58	25	1	348	60	285
Total at school . . .	3006	31	2975	1515	600	685	157	317	2133	832	2083
Never attended any school . .	1160	..	1160	2	1	..	..	..	1160	..	1160
Receiving private instruction .	122	..	..	..	..	..	..	..	..	..	..
No information obtained† . .	224	224	..	..	..	..	..	..	..	..	..
Total . . .	4512	377	4135	1517	601	685	157	317	3293	832	3243

* Five of these attended evening school for a quarter, and afterwards improved themselves; the remainder learned to read by attending Sunday school.

+ Of this number, 1731 attend, or have attended, both day and Sunday school; 611 boarding or day school only; and, in the cases of 300, the description of school was not ascertained. The attendance of 1276 was regular, of 665 was irregular, and respecting 716 this point was not ascertained; 1287 are now at school, and 1370 are not now at school.

‡ Of these, 29 are children of merchants or professional men, 26 of tradesmen, and 159 of operatives; 114 of the latter being now engaged as domestic servants.

*Annual Report of the Rev. JOHN CLAY, Chaplain to the Preston House of Correction. Presented to the Visiting Justices at the October Sessions, 1838.**

[Read before the Statistical Society of London on 17th December, 1838.]

THE past year, I regret to say, has brought with it more cases of felony to the Preston sessions than any former one. The calendars for the previous year had contained an unprecedented number of such offences; but the melancholy catalogue now has an excess of 25 over that for 1836-7. The bills sent before the grand jury, for felony, at each quarter, are as follows:—

TABLE I.

October, 1837	.	.	.	.	.	.	.	97
January, 1838	.	.	.	.	.	.	.	81
April,	"	.	.	.	.	.	.	57†
July,	"	(including an intermediate sessions in May).	.	.	.	.	.	67‡
								<hr/> 302

The results of the respective indictments in these cases are given in the following account of sentences:—

TABLE II.

Transported for life	.	.	.	.	.	.	3	Total 53, being something less than 1-6th of the whole.
" for 14 years	.	.	.	.	.	.	16	
" for 10 "	.	.	.	.	.	.	2	
" for 7 "	.	.	.	.	.	.	32	
Imprisoned for 2 "	.	.	.	.	.	.	5	
" for 1 year	.	.	.	.	.	.	26	
" for 6 months and less than 12 "	.	.	.	.	.	.	56	
" for 3 "	.	.	.	.	.	.	71	
" for 1 "	.	.	.	.	.	.	46	
" under 1 month	.	.	.	.	.	.	9	
Admitted evidence	.	.	.	.	.	.	4	
Acquitted at bar	.	.	.	.	.	.	25	
Bills ignored	.	.	.	.	.	.	1	
No prosecution	.	.	.	.	.	.	2	
Liberated on recognizance	.	.	.	.	.	.	1	
								<hr/> 302

The proportion of offences punished by transportation appears greater in the above Table than in the corresponding one for last year, being at that time less than 1-7th. In 1833-4, however, this class of offences was more numerous, both relatively and absolutely; they were 57 in number, and formed a fourth of the whole.

The following is a classification of the offences for which indictments have been preferred; and to shew the extent to which crime varies in its *direction*, and for facility of reference, I repeat the Table of the previous year, premising that the figures refer to the number of *criminals* implicated:—

* An Abstract of Mr. Clay's Reports from the year 1830-1 to 1835-6 will be found in the Society's Proceedings, at p. 246.

† Exclusive of four cases in which the parties surrendered at the sessions, and were acquitted.

‡ Exclusive of one case in which the parties surrendered at the sessions, and were acquitted.

TABLE III.

	1836-7	1837-8
1st. { Robberies by domestics from their employers . . . }	62	{ 19
{ Ditto by workpeople from ditto . . . }		{ 9
2nd. Ditto of exposed articles	46	41
3rd. Ditto from public-houses or beer-shops	12	14
4th. Ditto from the person in public-houses or beer-shops, or where the parties have been intoxicated	11	22
5th. Ditto accompanied by "breaking and entering"	10	24
6th. Ditto of fowls and pigeons	9	19*
7th. Ditto of lodgings (by lodgers)	6	8
8th. Ditto by prostitutes from the person	5	1
9th. Ditto of cattle	4	1
10th. Ditto from the person with violence	3	3†
11th. Robbery by a regular sharper	1	1
12th. Privately stealing in various ways	96	121
13th. Receiving stolen goods	2	13
14th. Bigamy	2	1
Stealing young growing trees		4
"Breaking and entering" a shippon to steal milk		1
		302

The variation in the amount of the respective kinds of criminality is most striking in the first class, viz., thefts by operatives and domestic servants from their employers, where the diminution amounts to 55 per cent. On the other hand, robberies from the person, originating in the intoxication of one of the parties, have been exactly doubled. Robberies accompanied by "breaking and entering" have been more than doubled; the same may be said of fowl and pigeon stealing; and the receivers of stolen property brought to trial are now 13, having been only 2 last year. The first-mentioned of these circumstances indicates, it is hoped, a better state of things among the regular working population; but I fear that some of the others point to a great increase among the habitually vicious.

The following Table will furnish the particulars in regard to the *committals* for felony, as to ages and causes of offence; it being borne in mind that 17 persons have been committed a second time during the year, and two of these a third time, which reduces the number of *offenders* to 284:—

TABLE IV.

Causes of Offence.	Under 15.		15 to 20.		21 to 30.		31 to 40.		41 to 50.		Above 50.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Drinking . . . . .	..	..	15	..	38	1	9	3	7	2	7	2	76	8
Various and uncertain	3	..	20	2	20	8	9	10	4	2	6	4	62	26
Idleness & bad company	8	..	5	1	3	..	1	..	..	..	..	..	17	1
Want and distress . . . . .	..	..	8	..	10	3	4	2	..	4	..	1	22	10
Weak intellects . . . . .	..	..	..	..	..	2	..	..	..	..	..	..	..	2
Temptation	1	..	6	2	3	2	1	..	1	..	..	..	12	4
Bad habits	10	..	33	1	8	3	5	1	..	1	..	1	56	7
Total	22	..	87	6	82	19	29	16	12	9	13	8	245	58
	22		93		101		45		21		21		303‡	
Centesimal proportion	7.25		30.75		33.32		14.84		6.92		6.92			

* Attended in one instance by "breaking and entering."

† Arising in each case from intoxication.

‡ Including one person who had committed a felony in Preston, but who was sent to London to be tried for a more serious offence, previously committed there.

The commitments for the last six years exhibit the ages of prisoners in the following proportion:—

TABLE V.

1st class, under	15 years	109 persons	8.36 per cent.
2d „ from 15 to 20	„	375 „	28.77 „
3d „ „ 21 „ 30	„	446 „	34.26 „
4th „ „ 31 „ 40	„	181 „	13.88 „
5th „ „ 41 „ 50	„	108 „	8.29 „
6th „ above 50 years	„	84 „	6.44 „

1,303

Criminality, it would thus appear, upon comparing the last Table with the present one, continues to be manifested in about the same proportion which has constituted the average for the last 6 years. It may, however, be worthy of note, that in 1836-7 young criminals under 15 were in the proportion of 11.19 per cent.

In my last report I had occasion to lament the great increase of felonious offences committed by residents in Preston, and it is with much sorrow that I find that increase still augmented. The following is a summary of felonies committed by residents in Preston during the seven years ending last July:—

TABLE VI.

Year 1831-2, 50 Felonies.	Year 1835-6, 27 Felonies.
„ 1832-3, 46 „	„ 1836-7, 84 „
„ 1833-4, 42 „	„ 1837-8, 103 „
„ 1834-5, 18 „	

The increase in the number of committals for felony in 1837-8, as compared to the previous year, being 25, Preston, it appears, has contributed 19 to that increase.* Anxious to ascertain as many particulars as I could, connected with this last-named circumstance, I proceeded to analyse the Preston cases in the mode adopted in the 4th Table, and the result is the following:—

TABLE VII.

Causes of Offence.	Under 16		15 to 20		21 to 30		31 to 40		41 to 50		Above 50		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Drinking . . . .	..	..	5	..	7	..	1	2	2	1	..	..	15	3
Various and uncertain .	3	..	2	1	1	7	4	3	1	2	4	2	15	15
Idleness & bad company	5	..	3	..	2	..	..	..	..	..	..	..	10	..
Want and distress . .	..	..	..	..	..	..	1	..	..	2	1	1	2	3
Temptation	1	..	1	1	..	..	..	..	1	..	..	..	3	1
Bad habits	2	..	17	..	1	1	4	1	..	1	..	..	24	3
Total	11	..	28	2	11	8	10	6	4	6	5	3	69	25
Recommitments within the year }	4	..	4	..	..	..	1	..	..	..	..	..	9	..
	15		34		19		17		10		8		103	
Centesimal proportion .	14.57		33.01		18.45		16.50		9.71		7.76			

* The appointment of many additional magistrates, under the Municipal Act, and their daily attendance, in petty sessions, at the Town-hall, may have increased the vigilance of the police, and the consequent apprehension of offenders.

The facts presented by this Table are—first, the great proportion of delinquents under 15, viz., $14\frac{1}{2}$ per cent., while in the general Table (No. IV.), which includes Preston, it appears to be only $7\frac{1}{4}$ per cent.; secondly, that the Preston criminals between 21 and 30 are only in about one-half the proportion shewn by the general account; thirdly, that the offences originating in the propensity to intoxication, being about 28 per cent. in the general Table, are only 17 in that for Preston; fourthly, that while culprits pleading poverty and hunger amount, in the general Table, to $10\frac{1}{2}$ per cent., in the Preston catalogue they are less than 5. The attempt to account for all these variations would be unnecessary, if not vain; but I think I am authorised to attribute the remarkable increase of criminality among young persons to the “*strike*” of 1836-7, when about 1400 children, being deprived for three months of their accustomed employment, were at once thrown into a state of dangerous idleness, and, in too many instances, of destitution. Under such circumstances, the temptations to dishonest practices would often be great, if not overpowering; and I fear that, so far from the effects of that event being worn out, its traces will be visible, for many years to come, to the eyes of the enquirer into moral statistics. The virulence of an evil taint in young blood cannot be more forcibly shewn than in the fact observable in the last Table, that of 11 boys arraigned for felony 4 were again tried within the year.

Pursuing the enquiry into the criminality of Preston, I present the following list of the trades, occupations, &c., of the various offenders, distinguishing the number of the latter who were under 21 years of age:—

TABLE VIII.

Trades.	No.	Under 21.	Trades.	No.	Under 21.
Labourers . . .	12	3	Brought forward.	40	12
Weavers . . .	5	1	Potter . . .	1	1
Carters . . .	4	1	Coachmaker . . .	1	0
Mechanics . . .	4	2	Butcher . . .	1	0
Spinners . . .	2	1	Shop-boy . . .	1	1
Stone-masons . . .	2	1	Employed in factories, exclusive of spinners	24	24
Ostlers . . .	2	1	Uncertain . . .	1	1
Joiners . . .	2	0		69	39
Tinman . . .	1	0	Domestic servants .	5	1
Shoemaker . . .	1	0	Married women of labouring class .	14	0
Veterinary surgeon .	1	1	Single women of ditto	5	1
Engineer . . .	1	1	Prostitutes . . .	1	0
Plasterer . . .	1	0			
Calico-printer . . .	1	0			
Canal-boatman . . .	1	0			
Carried forward .	40	12	Total . . .	94	41

If it be true that the strike has had a demoralizing effect, it will have been made manifest upon some of the poor and uninstructed classes so severely afflicted by that event,—and more especially upon that portion which is most seduced by temptation, and most uncontrolled by worldly caution and by religious principles. Accordingly it appears that more

than one-third of the whole amount of criminality in the male population of Preston has been furnished by boys previously employed in the factories. The remark, that poverty alone is by no means a prolific cause of crime, seems to be corroborated by the small number of offences committed while the strike was in actual existence; and a further proof of this may be found upon referring to the very few cases of weavers in the above list—a class which, it is well known, has been labouring for the last two or three years under the severest privations. Independently of general causes, there would seem to be a tendency to crime in particular families.* A young man is now awaiting his trial for a second offence, whose mother and brother are already transported; in another case, a mother and son are imprisoned, two other sons being transported; in a third instance, I find a boy committed for a third offence, whose father and two brothers have been sent abroad; and the last case I will mention is one in which the mother was tried for a felony some years ago, a daughter subsequently convicted of a felony, a son frequently committed for misdemeanors, a second daughter admitted evidence in a felony case, a third transported about a year since, while a fourth daughter and a second son are now in the prison under similar sentences.

The small proportion of felons between 21 and 30, for the last year, induced me to refer to the numbers of that class for the year preceding, and I find they amounted to something more than 22 per cent. I then examined the ages of prisoners tried at the Salford sessions, and at those for the borough of Liverpool; restricting the enquiry, as regards the former, to the persons whose offences were committed in the *parish* of Manchester and *township* of Pendleton, and as regards Liverpool, adding from the Kirkdale calendar, three felony cases which occurred in what may be considered the *town* of Liverpool. The result of this examination, as well as that for Preston, appears in Table IX.—[See *next page*.]

This Table renders the paucity of offenders between 21 and 30, in Preston, yet more striking; and I considered it worth while to continue the enquiry into the circumstance a little further. Now the Temperance Society of Preston, embracing, as it does, a greater proportion of the working class than any other similar society of the kingdom, might be supposed to have some connection with the facts under consideration; and in order to ascertain this, I requested the respectable secretary of that society to furnish me with an account of the ages of its members. Very kindly, and at no inconsiderable trouble, he has “carefully examined the register, and finds that the ages of the members are as stated in Table X.”

* This fact is particularly noticed in the Reports of the Inspectors of Prisons for Scotland. One instance is given, at p. 129 of the Third Report, of a man, W. W., who, with one of his sons, was hanged for murder. Another son committed an offence for which he was sent to the hulks; and soon after his release was concerned in a murder, for which he was hanged. Three of his daughters were convicted of various offences; and the mother was a woman of notoriously bad character. The family was a terror to the neighbourhood; and, according to report, had been so for several generations. In describing the criminal population of Hamilton and Irvine, it is also stated that a large proportion of the numbers given belong to a very small number of families. The cause of this is too obvious to require explanation. The strongest incentives to vice exist in such families, while the fear of punishment seldom deters the habitually criminal.—ED.

TABLE IX.
*Classification as to Age of Persons committed upon charges of Felony at Manchester, Liverpool, Preston.**

		Manchester.		Liverpool.		Preston.	
		Number.	Centesimal Proportion.	Number	Centesimal Proportion.	Number.	Centesimal Proportion.
Under 15.	{ Males . . .	42	} 6.05	10	} 2.59	15	} 14.57
	{ Females . . .	4		..		..
15 to 20 .	{ Males . . .	175	} 32.10	105	} 37.03	32	} 33.01
	{ Females . . .	69		37		2	
21 to 30 .	{ Males . . .	196	} 35.92	81	} 38.30	11	} 18.45
	{ Females . . .	77		67		8	
31 to 40 .	{ Males . . .	86	} 14.73	35	} 15.14	11	} 16.50
	{ Females . . .	26		23		6	
41 to 50 .	{ Males . . .	44	} 7.76	14	} 4.70	4	} 9.71
	{ Females . . .	15		4		6	
Above 50.	{ Males . . .	24	} 3.44	8	} 2.61	5	} 7.76
	{ Females . . .	2		2		3	
Total .	{ Males . . .	567		253		78	
	{ Females . . .	193		133		25	

TABLE X.

781 under	21 years	= 15.90 per cent.
2,421 from	21 to 30	" = 49.29 "
1,022 "	31 " 40	" = 20.82 "
474 "	41 " 50	" = 9.63 "
214 above	50 "	" = 4.36 "

This return, exhibiting such a high proportion of men between 21 and 30, will, I trust, fully justify the inference, that upon the working classes of those ages the society has exercised a most beneficial influence, particularly if we refer to Table VII., where it is seen that, as regards males, the offences caused in Preston by intoxication are only $14\frac{1}{2}$ per cent., while in the general Table IV. (excluding Preston), they appear to be $30\frac{1}{2}$ per cent.

The Table last given would, at first sight, lead to the conclusion that in Preston there is a greater proportionate number of young thieves than in Manchester or Liverpool. General opinion would however be inclined to question the accuracy of this conclusion; and there are certainly many important circumstances to be considered before it can be admitted. Upon looking over the Quarter Sessions calendars for the above-named towns, it would seem from that of Preston that many offences are made the subjects of indictment which are of a far more trifling character than any contained in those of Manchester or Liverpool.†

* I find I have committed an inadvertency in taking the number of Preston residents, instead of the number of felons whose offences were committed there. (Fide Table XIII.) The error is of little importance.

† I have known a boy committed for robbing a hen's nest, another for milking a cow under very trifling circumstances; and I recollect two children being arraigned for stealing cake from a fruit-stall. It may also be here stated, as being connected with the subject of committing for trial upon minor charges, that among the 302 Preston cases for the last year there were 6 for petty thefts of "cotton cops," "weft," &c., by operatives from the mills in which they were employed; while at the Salford sessions, during the same period, there were no cases of a similar kind among the whole 760 furnished by the parish of Manchester.

But the most important information upon this subject may be found in the following Table, which I have extracted, or rather compiled, from the last Report of the Prison Inspectors for the Home District.*

TABLE XI.

A Return of the Number of Prisoners, not exceeding 16 years of age, committed to the following Prisons in the two years 1836 and 1837.

	Lancaster.		Salford.		Kirkdale.		Preston.	
	M.	F.	M.	F.	M.	F.	M.	F.
1. Committed for trial at assizes or sessions	8	1	173	34	113	14	100	10
2. Committed on sentence	15	8	7	2	8	..	..	..
3. Committed on summary convictions, &c..	9	1	344	77	522	38	86	9
(This head includes all prisoners under 16, not comprised in either of the preceding.)								
4. Number comprised in the above who, within the two years respectively, have been committed more than once in the same year	32	10	524	113	643	52	186	19
	1	..	89	25	234	6	13	1
Centesimal proportion of recommitments per annum	2.38		18.00		34.53		6.83	

I can scarcely imagine that the young population of Manchester is, upon the whole, morally superior to that of Liverpool; but the ready means of employment in the former place, and its great dissimilarity to that which can be found for young persons in Liverpool, will account for much of the discrepancy between the two places observable in the above Table. There must, in fact, be many hundreds of unemployed and neglected children wandering about the Liverpool docks and elsewhere, who, were they in Manchester, would readily obtain such an employment in the mills as would permit no leisure for criminal practices. In addition to these remarks, I may be permitted to observe that the police magistrates of such large towns as Manchester and Liverpool may deem it advisable to dispose of many cases which, in fact, amount to larceny, by bringing them within the provisions of the vagrant or police acts; treating certain minor offences as misdemeanours, in preference to sending them to the sessions as felonies. This mode of proceeding, if it be not altogether satisfactory, is no doubt necessary in places where it is clearly seen that the criminal population is pressing upon, or exceeding, the means of adequate punishment. Lancaster Castle and the Preston House of Correction are yet capable of receiving every case of alleged felony from the hundreds of Lonsdale, Amounderness, Blackburn, and Leyland; but it is very doubtful whether the same can be said of the prisons appertaining to Salford and West Derby. The extract above given from the Inspectors' Reports (Table XI.) indicates very plainly

* *Ide* p. 153, *et seq.*

the practice, and perhaps the necessity, of exercising upon the juvenile criminals of Manchester and Liverpool a summary magisterial power. It is there seen that cases sent for trial to the Preston Sessions exceed the summary committals by about 17 per cent. In Manchester, on the contrary, the summary committals exceed the committals for trial by more than 103 per cent.; and Liverpool exhibits a similar excess, to the extraordinary amount of 340 per cent.

Before dismissing all reference to Table IX., it may be proper to make a few remarks connected with the great proportion of female criminals at Liverpool, originating, no doubt, in the number of careless and drunken seafaring men who become the easy prey of these dissolute women—a class, it is to be feared, whose numbers must be increased, and whose profligacy must be encouraged, by the facility and too often by the impunity with which their depredations are effected.* Among the calendars for the Liverpool Borough Sessions, now before me, there are four in which the “events of trial,” or rather of committal, are noted. From them I perceive that of 52 females, who had been committed for plundering in the manner alluded to, to the amount of £700 in cash, to say nothing of watches, &c., there are 25 noted “no prosecution,” 2 “no bill,” and 2 “acquitted.” At the corresponding sessions for Manchester the culprits of a similar character connected with the town amounted to 33,† and the property stolen to £140, while it appears that none of the criminals escaped for want of prosecution.‡ I mention these particulars in order to bring under consideration the facts that, not only is the law vindicated more effectually in one place than another, but that the criminals who now escape—perhaps, under the existing requirements of the law, unavoidably—belong to the most depraved and dangerous class of the community; which is evident from the nature of the sentences passed at Liverpool upon those offenders who were convicted, viz., transportation upon 12; a year’s imprisonment upon 5; from six to nine months’ imprisonment upon 5; and four months’ imprisonment upon 1.

The difference in the amount of crime between the northern and southern portions of the county having been alluded to by high judicial authority, I present the following Table, shewing the proportion which exists between crime and population in the respective hundreds, as evinced by the calendars for the assizes of March and August, and for the respective Quarter Sessions ending in July. The offences comprise those cases of “entering enclosed lands in the night time armed with guns, pistols, bludgeons, &c., for the purpose of taking and destroying game;” but all other misdemeanours are excluded.

* A similar excess in the proportion of female criminals exists at Newcastle, and was noticed in the Proceedings of the Statistical Section of the British Association, at its meeting in that town—(see Journal, p. 326). The same circumstance, arising from the same causes as stated by Mr. Clay, is reported to exist in all the large sea-port towns throughout the kingdom.—Ed.

† The number of Manchester cases of the kind alluded to, for the whole year, appears to amount to 67. Preston, in regard to the circumstances now under discussion, and as shewn by a reference to Tables III. and VIII., evinces a superior moral condition.

‡ It must be stated, for the sake of accuracy, that the Liverpool October sessions were for cases which had accumulated since the previous July. At Manchester the sessions are held every six weeks.

TABLE XII.

Felonies of all kinds (including Poaching at night, armed) for the whole County, with the Population of each Division and Hundred, and the Proportions between the one and the other, for the year ending in the Summer of 1838.

	Northern Division.				Southern Division.	
	Lonsdale.	Amounderness.	Blackburn.	Leyland.	West Derby.	Salford.
Tried at Lancaster assizes	10	12	6	4	..	..
Ditto sessions	17	..	..	..	..	..
Preston ditto . . . .	..	129	155	18	..	..
Liverpool assizes . . .	1	..	1	..	51	62
Ditto borough sessions .	..	..	..	..	389	..
Kirkdale sessions . . .	..	..	..	..	240	..
Salford sessions . . . .	..	..	..	..	..	1,173
Total of offences . . .	28	141	162	22	680*	1,235
Census of 1831	56,726	69,987	168,057	48,338	380,078	612,414
Proportion of offences to inhabitants in each hundred	1 in 2,026	1 in 496	1 in 1,037	1 in 2,197	1 in 558	1 in 495
Proportion of offences to inhabitants in each division	1 in 972				1 in 518	

The above Table has produced a result for which I was not prepared, in regard to the high rate of criminality in Amounderness; and I can only account for that apparent excess by referring to the observations which I have already made relating to the practice in Preston and its neighbourhood, of committing minor cases of felony for trial, instead of dealing with them in a summary way. These observations, it is true, are equally applicable to a large portion of the Blackburn hundred; but the majority of the inhabitants of Amounderness consists of the population of Preston, and it must be borne in mind that the efficient police of this town will bring to light many more offences than the constables of those districts where the population, although great, is more scattered. It is five years since I had occasion to remark the extraordinary discrepancy in the proportion of crime to population, in places where the inhabitants are similarly situated as regards their general circumstances; and it is yet matter of surprise that, as will appear from a subsequent Table (No. 13, second column), Burnley, with a population of 8000, should furnish 20 criminals; and Darwen, with 10,000, only 5; that Habergham Eaves, with 6000 inhabitants, should furnish 8; and Oswaldtwistle, with the same population, only 1. I cannot venture to assign for these inconsistent facts any cause which would be susceptible of general application, though I still suspect that the difference really

* The offences tried at Wigan are not included in the above: I have no account of them; but they will add some little to the felonies of West Derby.

exists not in the amount of *actual* but of *detected* criminality. It is also, I think, worthy of remark, that in the four northern hundreds of the county, offenders consist almost entirely of the labouring and uneducated class; few temptations existing there for the more instructed. Of the 1129 persons committed to the Preston jail during the year, for all offences, only 8 were capable of reading and writing with fluency; while, upon looking at the Liverpool calendars, I find the names of 48 male prisoners charged with felony who are described as able to "read and write well," 10 of whom are indicted for embezzling or stealing money from their employers. Many persons indeed who might have gone through life irreproachably in a rural district, or in one of our smaller towns, upon removal to a wealthy and luxurious place like Liverpool or Manchester, will be unable to resist one or other of the many temptations which solicit them almost hourly; and the young, or weak-principled, in their eagerness to partake of the pleasures perpetually before their eyes, plunge at once into deep iniquity, or gradually sink into habitual vice. To these dangers the educated and the uninstructed are alike exposed: theatres and gaming-houses, with all their vicious appendages, entice the former, while dram-shops and beer-houses seduce the latter.

I now present a Table which classes the felonies of the year, 1st, as regards the *places* at which they were committed; and 2nd, as regards the previous *residence* of the *offender*; adding, for the sake of ready comparison, the population of each place according to the census of 1831:—

TABLE XIII.

Felonies by Persons previously Inhabiting	No.	Felonies Committed at	No.	Population in 1831.
Preston	103	Preston	114	33,112
Blackburn	41	Blackburn	62	27,091
Burnley	27	Burnley	20	7,551
Colne	16	Colne	12	8,080
Haslingden	10	Habergham Eaves	8	5,817
Chorley	8	Rossendale Forest	8	18,697
Kirkham	6	Haslingden	7	7,776
Wheelton	4	Chorley	6	9,282
Clitheroe	4	Clitheroe	6	5,213
Accrington	3	Walton-le-dale	6	5,767
Standish	3	Darwen	5	9,639
Darwen	3	Accrington	4	6,283
District of Rossendale		Withnell	4	1,251
Forest	3	Whalley	3	1,151
Do. of Pendle Forest	2	Standish	3	2,407
Padiham	2	Marsden	3	4,713
Woodplumpton	2	Kirkham	3	2,469
Goosnargh	2	Pendle Forest	3	7,092
Walton-le-dale	2	Padiham	2	3,529
Habergham Eaves, Hutton,		Garstang	2	929
Hoole, Garstang, Withnell,		Hutton	2	715
Longridge, Claughton,		Goosnargh	2	1,844
Blackpool, Salisbury, Hoghton, Mellor, Trawden, Oswaldtwistle, Brindle	14	Heapy	2	465
Other places not in the three hundreds	21	Brindle	2	1,558
		Wheelton	2	1,519
		Whilpsluire	2	337
		Woodplumpton	2	719
Carried forward	276	Carried forward	295	

Felonies by Persons previously Inhabiting	No.	Felonies Committed at	No.	Population in 1831.
Brought forward	276	Brought forward	295	
Other counties	19	Trawden	1	2,853
Ireland	4	Oswaldtwistle	1*	5,897
U. S. America	2	Poulton	1	
West Indies	1	14 others places of small population	14	1,025
	<hr/> 302		<hr/> 312	

The cases of re-committal for felony are unusually great, being, indeed, more than sufficient to account for the excess of the present over the preceding year. They are as follow:—

TABLE XIV.

	2nd Com.	3rd Com.	4th Com.	5th Com.	Total Recommittals.
Total Committed . .	302	59	9	1	1 = 70 = 23·19 per cent.

The recommittals for the preceding year were 13·35 per cent., and on the average of the five years ending July, 1837, they were 15·34 per cent. Upon two former occasions, in 1833-4 and 1836-7, when the criminals much exceeded the yearly average, the recommittals, constituting, as it then seemed, a constant quantity, were proportionally diminished; but now the large amount of recommittals has occasioned the general excess.

The 70 cases of recommitment comprise only 68 offenders—two of them having been committed a third time within the year. Of these 68—

		Centesimal Proportion.
21 were first indicted when	under 15	= 30·88
23 { 13	from 15 to 17	= 33·82
10	18 „ 20	= 17·65
12	21 „ 30	= 8·83
6	21 „ 40	= 1·47
1	41 „ 50	= 7·35
5	above 50	
<hr/> 68		

My last report contained a Table shewing that, upon an average of the five previous years, recommitted delinquents under 15 were in the proportion of 20·28 per cent., and, between the ages of 15 and 20, 32·16 per cent.; and it was observed “that more than half the instances of a repetition of crime are to be found in persons who began their bad practices under 21 years old, while such instances amount to 40 per cent. in persons under 18.” The present year, however, places the difficulty of restraining and deterring young criminals in a yet more striking and melancholy aspect; for it appears that, of the 68 persons sent to trial for repeated offences, exactly one-half commenced their career of crime before they were 18 years of age.

I have frequently stated, what indeed must be obvious to every one, that idleness, ignorance, and parental neglect, are chiefly instrumental in creating such proneness to crime in young persons; and to this it may be added, that there is a greater tendency to mutual corruption among the young than among the old. When a boy is recommitted for a felony, he is frequently accompanied by one or more delinquents about

* I believe this to be the only case from Oswaldtwistle during the last 3 or 4 years.

his own age, whom he has seduced into crime; but this is seldom the case, indeed I cannot record one instance, with prisoners of mature age. In illustration of this may be mentioned the following circumstance, viz., that of 141 persons under 22, committed during the year upon charges of felony, there were 67 who appear to have perpetrated their offences unconnected with any accomplice, and 74 who were associated in parties of two or more; while among 162 prisoners of all ages above 22, there were 136 who committed their offences singly, and only 26 who were connected with others.

The following is a Table of committals from July, 1837, to July, 1838, in which are distinguished the offences, ages of offenders, and, as far as can be ascertained, the causes of offence:—

TABLE XV.—(PART I.)

Offences,	Ages.														Total.	
	Under 15		15 to 20		21 to 30		31 to 40		41 to 50		Above 50					
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Felony	22	..	87	6	82	19	29	16	12	9	13	8	245	58		
Vagrancy, &c. . . .	9	..	47	2	34	7	30	6	10	1	17	2	147	18		
Assault . . . . .	..	..	20	..	42	..	19	5	4	1	10	1	95	7
Disorderly, &c. . . .	..	..	20	2	43	5	7	4	11	1	5	4	86	16
Neglect of family . .	..	..	..	..	25	2	30	1	13	..	3	..	71	3
Neglect of work . . .	1	..	22	2	19	1	7	1	1	..	3	..	53	4		
Disorderly in Work- house	1	..	5	4	4	11	8	9	5	2	6	1	29	27		
Poaching, &c.	1	..	17	..	20	..	10	..	4	..	2	..	54	..		
Street-walking	22	..	26	..	3	..	2	53	..	
Trespass	2	1	15	..	18	..	9	..	5	1	1	..	50	2		
Bastardy . . . . .	..	..	..	..	27	1	4	..	3	..	1	..	35	1
Embezzling . . . . .	..	..	1	..	4	1	8	1	4	..	6	..	23	2
Obtaining goods or money . . . . .	..	..	..	..	8	1	2	..	1	..	1	..	12	1
Attempted Felony . .	1	..	7	..	2	..	..	..	1	..	..	..	11	..
Illicit still . . . . .	..	..	..	..	5	..	3	..	2	..	..	..	10	..
Assault (indecent) . .	..	..	2	..	5	..	1	..	..	..	..	..	8	..
Uttering base coin . .	..	..	2	..	2	..	2	..	1	..	..	..	7	..
Stealing fruit . . . .	..	..	7	..	..	..	..	..	..	..	..	..	7	..
Illegally pawning . . .	..	..	1	..	1	1	1	1	..	1	..	..	3	3
Intimidation . . . . .	..	..	1	..	1	..	2	..	1	..	1	..	6	..
Hawking without a licence. . . . .	..	..	1	..	2	..	..	..	2	..	..	..	5	..
Election riot. . . . .	..	..	2	..	1	..	1	..	..	..	..	..	4	..
Selling ale without a licence . . . . .	..	..	..	..	..	..	1	..	1	..	..	..	2	..
Soldiers from courts- martial . . . . .	..	..	3	..	25	..	11	..	1	..	..	..	40	..
Deserters. . . . .	..	..	..	..	1	..	1	..	..	..	..	..	2	..
Suspected insane . . .	..	..	..	..	..	..	..	..	1	..	..	..	1	..
Sundry . . . . .	..	..	3	..	3	..	4	1	..	1	1	..	11	2
Total	37	1	263	38	374	75	190	48	83	19	70	16	1017	197		
	33		301		449		238		102		86		1214			

TABLE XV.—(PART II.)

OFFENCES.	CAUSES OF OFFENCE.																	
	Drinking.		Uncertain.		Idleness, &c.		Temptation.		Want.		Weak Intellects.		Confirmed Bad Habits.		Combination, &c.		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Felony	76	8	62	26	17	1	12	4	22	10	2	56	7	245	58			
Vagrancy, &c. . .	25	1	34	6	19	1			25	4	3	41	6	147	18			
Assault	60	3	31	4						1		3		95	7			
Disorderly, &c. .	70	7	9	4	2				2	2		3	3	86	16			
Neglect of family	10	1	31	1	1				29	1				71	3			
Neglect of work.	8		29	3	6				3				1	7	53	4		
Disorderly in work-house.	8	1	17	17	1				2	2	2	1	5	29	27			
Poaching, &c. . .	1		46		6				1					54				
Street-walking . .				10								43			53			
Trespass	2		27	1	16	1			4		1			50	2			
Bastardy			35	1										35	1			
Embezzling . . .	2		19	2					2					23	2			
Obtaining goods or money	4		4		1				1		1	1		12	1			
Attempted Felony			3									8		11				
Illicit still			4						6					10				
Assault (indecent)	5		3											8				
Uttering base coin	2		5											7				
Stealing fruit . .				4					2			1		7				
Illegally pawning	1		2						2	1				3	3			
Intimidation. . .	2		1										3	6				
Hawking without a licence			4						1					5				
Election riot. . .	4													4				
Selling ale without licence.									2					2				
Soldiers from courts-martial	35		5											40				
Deserters			2											2				
Suspected insane	1													1				
Sundry	3		5	1					3			1		11	2			
Total	319	21	376	78	73	3	12	4	107	20	6	4	114	67	1017	197		
	340		45		76		16		127		10		181		1214			

The following Table will shew the frequency of recommitments, and the ages of the offenders.

TABLE XVI.

Committals as related to the Age of Offenders.

AGES.	1st Committal.		2nd Committal.		3rd Committal.		4th Committal.		5th Committal.		6th Committal.		7th Committal, and upwards.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1st Committal under 15	19	1	6	..	7	..	4	..	..	..	..	..	..	..	36	1
2nd " 15 to 20	171	23	58	10	20	1	8	2	4	1	..	1	3	..	264	38
3rd " 21 " 30	233	45	89	16	33	4	6	2	5	..	2	1	4	7	372	75
4th " 31 " 40	117	32	31	11	29	2	5	2	5	1	2	..	3	..	192	48
5th " 41 " 50	40	12	21	1	8	3	8	..	4	..	1	..	1	3	83	19
6th " Above 50	44	11	15	1	5	2	2	1	1	..	1	1	2	..	70	16
	624	124	220	39	102	12	33	7	19	2	6	3	13	10	1017	197

Among the 1214 committals particularized above, there are 71 cases of second committal; 13 of third committal; and 1 of fourth committal = 85 recommitments within the year. Following the plan adopted in my last Report, I have framed the following Table:—

TABLE XVII.—Particulars of 85 Cases of Recommitment during the year ending July, 1838.

OFFENCES UPON			EDUCATION.					RELIGION.	
1st Committal.	2nd Committal.	3rd Committal.	4th Committal.	Unable to read.	Barely read.	Read Testa-ment.	Read and write a little.	Read and write well.	Repeat Lord's Prayer.
19 Felony	17 Felony 1 Vagrant 1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	2 Felony 1 Attempt at felony 3 Vagrants . . . . .	..	12	4	3	..	..	12
14 Vagrants	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse . . . . .	..	..	7	2	3	1	1	7
6 Disorderly in workhouse	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	3	2	1	..	..	3
6 Disorderly (Drunken-ness)	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	2	3	..	1	..	4
6 Prostitutes	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes	1 Prostitute	2	2	2	..	..	1
4 Poaching	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	..	1	2	1	..	1
3 Trespass	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	3	..	..	..	..	3
2 Soldiers from Courts-martial	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	..	1	..	..	..	..
2 Assault	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	2	..	..	..	..	2
2 Embezzling	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	1	1	..	..	..	1
1 Bastardy	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	..	..	..	..	..	2
1 Illegally pawning	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	..	1	..	..	..	1
1 Neglecting family	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	..	..	..	..	..	1
1 Illicit still	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	1	..	..	..	..	1
1 Attempted felony	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	1	..	..	..	..	1
1 Obtaining money	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	1	..	..	..	..	1
1 Fruit-stealing	1 Neglect of work 9 Vagrants 1 Obtaining money 1 Attempt at felony 2 Felony 1 Trespass 6 Disorderly in workhouse	1 Neglect of family 1 Felony 1 Ditto 3 Prostitutes . . . . .	..	1	..	..	..	..	1
71	71	13	1	36	17	12	3	2	1
71	71	13	1	36	17	12	3	2	1
71	71	13	1	36	17	12	3	2	1

The following Table shews the amount of ignorance in the 1129 individuals committed for various offences during the year, and the connection subsisting between that and the causes which have led to their offences:—

TABLE XVIII.
Degree of Education as related to Causes of Offence.

Degree of Education.	Causes of Offence.							
	Drinking.	Uncertain.	Idleness and Bad Company.	Temptation.	Want.	Confirmed Bad Habits.	Weak Intellects.	Combination of Workmen.
1. Unable to read	139	215	49	5	59	72	7	8
2. Barely capable of reading. . .	57	92	12	4	24	32	1	..
3. Can read the Testament . . .	46	61	5	2	19	21	..	1
4. Can read fluently	14	14	1	1	3	4	..	1
5. Can read well and write a little	71	50	6	3	17	5	..	..
6. Can read and write well . . .	4	3	..	1	..	..	..	..
Total	331	435	73	16	122	134	8	10
								1129

If we consider the educated criminals as represented by the amount of those who are able to "read and write well," the proportion is remarkably small; and the inference surely must be, that education prevents or restrains crime, either by the operation of those good and religious principles which it should be its great object to communicate; or, at the least, by giving a taste and capacity for pursuits incompatible with the low and debasing propensities which open the door to crime for the ignorant and sensual. On the other hand, it is evident that the greatest absolute amount of crime is the result of ignorance and drinking combined. It is also, I think, specially worthy of observation, that as the scale of instruction rises intoxication begins to exhibit itself as a gradually increasing cause of crime, until, with the educated, it appears paramount over every other which can be distinctly ascertained. This truth I have thought it worth while to illustrate statistically in the following Table, which shews the proportion that intoxication, as a cause of crime, bears to all others made known by the criminals' statements, &c. It must be premised, that the column of Table XVIII. marked "uncertain" is rejected from the calculation, though it should be borne in mind that a great proportion of those uncertain causes is referable to habitual drinking; the culprit, however, not being under its influence when his offence was actually committed.

TABLE XIX.

Ratio of Drinking, as a Cause of Crime, to all other known Causes, with reference to the Degree of Education in the Criminal.

In Class No. 1, drinking is to other causes, as 1 to	1.43
2, " " "	1 " 1.28
3, " " "	1 " 1.04
4, " " "	1 " .71
5, " " "	1 " .43
6, " " "	1 " .25

The propensity to intoxicating liquor is only one cause among others—poverty, idleness, temptation—which leads the ignorant into offences; but the educated man, if he be driven to a breach of the laws, is almost always driven by intoxication. His education or his principles might resist the temptations arising out of poverty or idleness, but neither his education nor his principles can aid him when he has surrendered himself to the irresistible influence of liquor.

It has been questioned whether the evils resulting from drunkenness are so great as they are generally represented; and it has been said that the vice itself is gradually becoming less prevalent. I am inclined to hope and believe that the assertion is well founded; but the amount and the nature of the crimes for which drunkenness is yet responsible are really awful. I have reason to believe, that the information embodied in the following Table, with respect to the cases of murder and manslaughter, at the last two assizes, may be relied upon:—

TABLE XX.

Charges preferred at the Lancaster and Liverpool Assizes, 1838.

Nature of Crime.	Causes of Crime.								
	Insanity.	Pitched Battle.	Extreme Passion.	Coach Accident.	Coach-racing.	Neglect in use of Machinery.	Giving Rum to a Child.	Drinking.	Other Causes.
Murder	1	1	1	..	..	1	..	2	4
Manslaughter . . . . .	..	1	2	1	2	1	1	16	4
	1	2	3	1	2	2	1	18	8
									38

Eighteen cases of murder and manslaughter, in one year, arising solely in the propensity to, and facilities for, the abuse of intoxicating liquors! Were any new cause of crime, prevalent and powerful as the one I speak of, suddenly to appear among us, the energies of the whole community would be forthwith directed to its suppression; but we are familiarized with the features of this old Destroyer, and, as if crime and ruin were not broadly written upon them, continue insensible to their real hideousness.

The last, and probably the most important, Table, which I have to submit, is the following, which manifests the amount of ignorance as to religion, in the 1129 unfortunate persons already spoken of:—

TABLE XXI.

516 prisoners were quite ignorant of the simplest truths.

995 „ capable of repeating the Lord's Prayer.

37 „ occasional readers of the Bible.

1 prisoner was familiar with the Holy Scriptures, and conversant with the principles of religion.

Among the 516 entirely ignorant 124 were incapable of repeating the Lord's Prayer.

The last Table corresponds in its general features with that of last year; and I can add little to the observations which I then made upon the subject of ignorance in religion, unless it be to state that very few of the whole 1129 persons—probably not more than 20 or 30—had habitually attended any place of Divine worship. This estimate will be undisputed by all those who have observed the almost general desertion of the House of God by that portion of the working population which consists of males in the prime of life: and I think that if the subject were investigated, it would appear that this desertion is in the ratio of the density of the population. Village congregations would be found least obnoxious to this remark, and those of large towns most so.

While I have found so much cause for regret in the increased number of committals for the year, I am thankful, on the other hand, for being permitted to hope that, by the blessing of Divine Providence, there have been some instances of reformation among the prisoners. The unaffected attention generally shewn by them in the chapel must, in some instances, I trust, have been followed by an awakening to their real spiritual condition, and by a permanent religious impression. Many unsolicited assurances to this effect have been made to me by prisoners on the eve of their discharge; but I rely less upon these assurances than upon information subsequently and incidentally received. It has also been gratifying to me to observe that the debtors—to the number of from 3 to 6—with whom attendance at the chapel is optional, not only come to the Sabbath service, but likewise to that of every morning. Among the instances of reformation I will name but one, remarkable, as manifested in an individual whose class I have usually regarded with almost hopeless feelings.—M. A., “an unfortunate female,” aged 28, was liberated in May from her fourth imprisonment in the year. Addiction to liquor having been mainly the cause of her disorderly conduct, immediately upon her discharge she pledged herself to abstain from it, and, after receiving a little assistance, by the instrumentality of some truly benevolent persons, obtained a situation in one of the principal mills. Up to this moment she has been leading an exemplary life, and, I am informed, has assisted her poor parents, who live near Lancaster, by remittances of useful articles of clothing. It is true, this poor woman’s probation has been a short one; but I am encouraged to hope for the best results, by the recollection of a somewhat similar case, alluded to in my report for 1826, in which my expectations have been fully realized.

Since I presented my last report, the question of prison discipline has attracted much notice; and the appointment of a committee of magistrates to enquire into the subject, as regards this county, may render the following observations not altogether inappropriate.

Most elaborate and valuable reports upon the state of the prisons in England and Scotland have been annually laid before Parliament for the last three years; in which reports the two most prominent systems of discipline—the *separate*, and the *silent*—have been fully discussed; and the workings of each, in this country and elsewhere, appealed to in support of the systems recommended by their respective advocates. The majority of the gentlemen appointed to the office of inspector of prisons are in favour of the separate plan; by which is meant, the individual

and entire seclusion of prisoners from each other, in cells of about 13 feet by 7, and 10 feet high, which are to be provided with every requisite for warmth, ventilation, and cleanliness; the prisoners to be furnished with employment; to be visited daily by the principal officers; and to attend chapel on the Sabbath, under such regulations as shall ensure the integrity of the system. Many and powerful arguments are advanced in support of this plan, and there can be little doubt that it must have great advantages. Religious feelings, and the consequent probability of permanent reformation, are certain, in many cases, to be awakened in a solitude which is chiefly interrupted by the visits of the minister of religion. Contamination, if the system be perfectly administered, is impossible. While it has its consolations for the serious or devout, it has none whatever for the hardened; and is therefore adapted to reform the one, and deter the other. It may be said indeed to possess, as regards the characters of the confined, a self-adjusting principle. These are only a few, though probably the most prominent, of the reasons in favour of the plan of separation. The objections made to it must now be mentioned: they are, 1st, the very great expense which would be incurred by carrying out the system into full operation; 2nd, the tendency to insanity which it is said to produce in prisoners who undergo a long confinement; 3rd, the difficulty of providing suitable employment, especially such as would be available to the prisoner on his discharge; and, lastly, the fact, as stated in the report of the Inspector for Scotland (a gentleman favourable, nevertheless, to the system), that at Glasgow, the only place in this country, I believe, where the plan has been fully tested, the recommittals are 50 per cent.

The plan based upon the principle of *silence* is one which permits the employment of prisoners in sight of each other, but forbids the slightest degree of intercourse by words, signs, or looks; and provides for complete separation at night. This system is asserted "to possess one superior quality among others—the placing men under trying circumstances where they are compelled to exercise, and may acquire, the valuable habit of self-control: at the same time social duties are kept in view; for it exacts respect to authority."* The opponents of this plan maintain that the prisoner is kept in a constant and injurious state of excitement, by his inclination and efforts to evade the rule; and it is also alleged that there can be no security for the uniform rigour of its application.

The plan of entire separation, if fully established, should guarantee its efficacy by the mere force of its leading principle; that of silence depends almost entirely upon the persons to whom the execution of it is committed.†

I am still decidedly of opinion that the introduction of the separate or

* Third Report by the Inspector of Prisons for the Northern District, p. 5.

† "Dans les prisons d'Auburn, de Wethersfield, de Sing Sing, et de Boston, le système de la réforme (*silence*) ne repose point sur une théorie aussi philosophique qu'à Philadelphie. Dans cette dernière prison le système (*separation*) semble opérer de lui-même, par la force seule de ses principes; à Auburn, au contraire, et dans les prisons de la même nature, son efficacité dépend beaucoup plus des hommes chargés de son exécution: on voit donc concourir au succès de celles-ci des efforts extérieurs qui ne s'aperçoivent pas autant dans l'autre."—"Du système Penitentiare aux Etats Unis," par MM. Beaumont et de Tocqueville, 1833.

silent plan into the prison with which this report is more immediately connected is greatly to be desired; and should it be postponed for the present, great advantage would arise from the institution of a more extended classification, combined with the practical use of one of the systems. There are now (1st October) within the walls of the Preston House of Correction 24 males and 8 females convicted of felony, 45 males and 16 females awaiting their trials, and 72 males and 8 females confined on summary or sessions convictions for various misdemeanors. Each of these classes might be subdivided, and with the greatest benefit to many of the individuals comprised in it: for instance, among the convicted felons there are the determined offenders of all ages, whom nothing can reform, and whom nothing but a system of the greatest severity can deter;—to these the application of the silent or separation plan would be just, and might be beneficial. There are the prisoners of mature age who have been led into a first crime, it may be said, incidentally, and who would be, I believe, in many cases reclaimable, if guarded carefully from further contamination, and subjected to a treatment in which they should be able to perceive that their reformation was considered a more desirable object than their punishment. Many young offenders are of a character as irreclaimable as the worst of the adults; while there are a few sentenced for a first and trifling offence, in whose cases the discipline of the prison is of the first importance. Careful separation during a short imprisonment, which should combine decided punishment with the means of amendment, would be generally sufficient, I trust, as regards this class, to obviate a relapse into crime; while, on the other hand, exposure to indiscriminate intercourse would be exposure to moral ruin. These remarks on the tried felons are applicable with greater force to the untried; inasmuch as the idleness in which their time is passed promotes, in a tenfold degree, all the bad effects of unrestrained intercourse. The misdemeanor class also requires a similar subdivision; and indeed among the prisoners comprised in that, the scale of character is still more extensive; ranging from the profligate vagrant, the old “jail-bird,” familiar to the prison-walls for years, to the intelligent, not to say the respectable, operative, who is imprisoned for “breach of contract” with his master, under circumstances which detract but little from his moral character.

These observations are such as I have submitted to the magistracy in former reports; and I venture to repeat them now, because they appear applicable to the recommendations made by Mr. Baron Alderson, at the last Liverpool Assizes. I am not prepared to assert that the most careful and extensive classification would be equally efficient with a perfectly organized plan of either silence or separation; but it would be a most important improvement upon the present practice, and could be put into operation, I imagine, at an expense but little exceeding the expenditure now incurred.

The necessity of separation, or more detailed classification among the female prisoners, arises from the circumstance that many of the younger ones, upon the termination of their imprisonment, have been met, at the very gates of the House of Correction, by women who are known to be the keepers of “disorderly houses;” the deluded girls having been, it is believed, up to that time innocent of the profligacy into which they were

about to enter. These meetings, it is justly supposed, were arranged between the parties by previously liberated women, whose contaminating influence upon the prisoners of their class is manifested in these lamentable results.

With certain classes of prisoners, such as relapsed felons and vagrants, some little increase in the severity of the discipline would have a wholesome effect. Indeed, it may perhaps be admitted as a postulate, that prison discipline should, at the least, be so severe as to deter every one who has once experienced it from committing offences for the express purpose of again entering the prison. Under present circumstances this is by no means the case. A vagrant admitted to me, a short time ago, that he wished to come into the jail for the sake of medical aid (there being, however, nothing very urgent in his case); and a woman is now awaiting her trial, who perpetrated her offence, she says, knowing that her committal would follow, and that she should be "better off" in prison than she was out of it.*

I cannot conclude this report without adverting to the necessity of something in the nature of a Refuge for the Destitute in several districts, which, upon a plan more extended than that of Liverpool, should admit the really destitute of every description until capable of being forwarded to their respective parishes, or provided with suitable employment. In this manufacturing district, the latter is attainable by those who are qualified by previous occupation, and whose characters are not very bad, with much more facility than is generally supposed.

[Mr. Clay has announced his intention to adopt the form of registry suggested by a Committee of the Statistical Society, which appeared in vol. i. page 177 of the Journal.]

Statistics of the Population of the Kingdom of Saxony, to December 1837, including an account of the Births, Deaths, and Marriages, compared with those of the Six preceding Years. Abstracted from the Publications of the Statistical Society of Saxony.† With Incidental and General Remarks. By W. R. DEVERELL, Esq.

[Read before the Statistical Society of London, on the 18th January, 1839.]

THOUGH the total amount of the population of Saxony, to which the following particulars more especially relate, does not exceed that of the city and suburbs of London, the completeness and precision exhibited in its classification render the results deducible therefrom most valid for the statistician; for whose useful purposes, in forming average numbers and deducing general principles, it is at least as indispensably requisite that facts should be fully, exactly, and methodically reported, as that they should relate to numerous masses of individuals, and extensive periods of time. In the present instance, the observed and registered facts have

* The question of prison discipline is becoming of the greatest importance. The feeling against capital punishment appears to increase, and the parliamentary committee upon transportation, which has just closed its labours, recommend the discontinuance of that practice, upon grounds fully established by the evidence brought before it.

† *Mittheilungen des Statistischen Vereins für das Königreich Sachsen.* The fourth number contains the census of July 1832; the sixth that of December 1834; and the tenth that of December 1837.

been collected, classified, reduced, and generalized, in strict fulfilment of the conditions required in the procedure of the exact sciences, of which statistics may assuredly be considered as one, especially with regard to that department of its province to which the present documents relate, namely, Vital Statistics; implying investigations of numerical facts respecting the living and dying; thence deductions of the general laws or constants to which human life is subject, and developments of the physical and moral conditions required for its preservation and improvement.

The individual facts of this department of knowledge, though subject, like all others, to the modifications of circumstantial phenomena, are positive entities, having such essential similarity and uniformity as to admit of their being scientifically classified and estimated by the computations of arithmetic; and though much has been said and written upon the proper description of statistics, in consequence of the apparent difficulty of determining what particular facts (as positively or probably exerting important influence on the welfare of society) should be included in the statistical inventory, it may doubtless be asserted that, whatever be the questionable nature of any other classes of facts, those which relate to *population* are some of the peculiar, and indeed the primary subjects of statistical science; and therefore are they highly and generally important, if, as would appear beyond dispute, facts *are* statistical only inasmuch as they can be shewn to have a direct relation to the ostensible end for which social union is established—the greatest happiness of the greatest number; and that, all national and even local legislation can be just and equitable only as it proceeds upon the general average principles obtained from statistical documents.

Saxony, with a comparatively limited territory, possesses a great variety, not only of soil and climate, but of economical and manufacturing industry in every department of the arts of civilized life. It has, therefore, a peculiar claim to be regarded as a region for the prosecution of *normal* observations; the more so as during several years it has been exempted from war, dearth, pestilence, and other public calamities which occasion social confusion, and alter the natural standard average of mortality. With respect only to the single question of duration of life, the fact that, in Saxony, the proportion of annual deaths varies in different localities, from 1 in 19 to 1 in 65, sufficiently displays the important influence of particular circumstances, and justifies the degree of attention which the Statistical Society of that kingdom has bestowed upon the subject of population.

It may be well to remark here that, the Statistical Society of Saxony differs from several similar Associations in other countries, in being more directly connected with, and subservient to the purposes of, the State in which it is established; for, though all societies instituted for the collection of statistical facts are similar, as to the subjects and nature of their business, and are properly considered auxiliary, to the offices of the State, the Saxon Society more especially appears to constitute an important item in the political arrangements of that kingdom. In proof of which it is requisite only to instance the fact of its having performed the momentous task of collecting, arranging, and publishing,

at triennial periods, very elaborate and complete accounts of the whole national population. In connection with this remark may be cited a passage from a useful work, by an Honorary Foreign Member of the Statistical Society of London (*Theorie der Statistik*, Von Count Gräberg af Hemsö), in which it is stated that "All governments are now convinced of the importance of statistical studies, and are making them the object of their especial and incessant attention; and in order that the results obtained by the labours of private individuals may at once be made available for official purposes, many governments have promoted the formation of statistical societies, and furnished them with the requisite means and documents for the prosecution of their important enquiries. Indeed, it were needless," adds the author, "to prove that governments can and must direct statistical studies in the right course, for they are deeply interested in their progress, and must benefit or suffer as statistical exhibitions are right or wrong." From this work have been translated many of the general statements in the present paper respecting the average proportions of births, deaths, and marriages, facts which, in Europe, have been registered only since the age of Louis XIV.

The satisfactory care with which population enquiries are conducted in Saxony will be evident on considering the following numerous distinctions comprised in the adopted form for taking a census:—

Number and names of civil districts, towns, villages.

- ,, of houses, inhabited, uninhabited.
- ,, of inhabitants, male, female, total, in each district, town, village, and detached residence.
- ,, of ditto, within each of 12 different periods of age, as shewn in the following tables.
- ,, of persons born blind, deaf and dumb.
- ,, of children under the age of six years placed out to be nursed and kept for pay.
- ,, of housekeepers, distinguishing the number of married couples, and married persons living separate.
- ,, of unmarried persons, distinguishing the number of widowers and widows; the number divorced, male and female.
- ,, of persons belonging to different religious denominations, distinguishing, first, under the appellation of Christians, the number of Evangelical Lutherans, Reformists (Calvinists), Catholics, and adherents of the Greek Church; and, secondly, the number of Jews.
- ,, of town, and of country inhabitants. } under each of the
- ,, of individuals composing the military* establishment } above divisions.
- ,, of persons engaged in each profession, trade, and every other industrial occupation.

A supplementary account contains the number and kinds of factories, shops, and all establishments connected with trade, manufactures, commercial business, and the useful arts—of mills, steam-engines, and important machines; of establishments for public accommodation, namely, hotels, inns, coffee-houses, &c.

The total population of Saxony—

In 1832	was	1,558,153
1834	,,	1,595,668
1837	,,	1,652,114

* Including the families of soldiers, and all official persons connected with the army department.

The following are the total results of the census of 1837:—

CHIEF TOWNS.	HOUSES.		INHABITANTS.		
	Inhabited.	Uninhabited.	Males.	Females.	Total.
Dresden	3,017	95	31,699	37,824	69,523
Leipzig	1,453	19	23,411	24,103	47,514
Chemnitz	1,163	60	11,308	10,957	22,265
Freiburg	1,671	39	5,501	5,945	11,446
WHOLE KINGDOM.					
141 Towns	49,615	2,225	258,261	275,042	533,303
3,502 Villages, &c. . . .	163,242	2,773	532,115	570,772	1,102,887
Town and Country	212,857	4,998	790,376	845,814	1,636,190
Military and those therewith connected . . . . .	..	..	13,626	2,298	15,924
Total	212,857	4,998	804,002	848,112	1,652,114

NUMBER AT EACH AGE.

In 1000 Inhabitants
the proportions were

	Males.	Females.	Total.	In 1837	In 1834
From Day of Birth to completion of the 6th Year	126,380	128,779	255,159	154	155
From the 6th to the 14th Year	138,169	140,953	279,122	169	174
" 14th " 19th "	84,440	88,729	173,169	105	101
" 19th " 21st "	28,362	33,012	61,374	37	33
" 21st " 30th "	119,565	128,919	248,484	150	149
" 30th " 40th "	108,354	113,539	221,893	134	134
" 40th " 50th "	80,358	89,153	169,511	104	104
" 50th " 60th "	63,065	68,014	131,079	79	82
" 60th " 70th "	38,925	40,546	79,471	48	48
" 70th " 80th "	14,309	14,356	28,665	17	16
" 80th " 90th "	2,019	2,047	4,066	2	3
Above the 90th Year	56	65	121	..	..

	Males.	Females.	Total.
Number Deaf and Dumb	665	514	1,179
" Born Blind	189	237	426
Children under six Years of Age placed out to be nursed and kept for pay . . }	1,576	1,591	3,167
Number of Householders . . . . .	..	..	368,112
" Married Couples . . . . .	..	..	285,769
" Married Persons living separate	5,491	5,419	10,910
" Persons Unmarried	512,742	556,924	1,069,666
Of whom are Widowed	26,280	60,655	86,935
" Divorced	1,497	2,398	3,895

Number of each Religious Denomination.

Christians.—Evangelical Lutherans	1,620,393
" Calvinistic Reformists	1,803
" Catholics	28,998
" Greek Church	72
Jews	848

From a comparison of the amount of the population, as found by the census of December 1837, with that of the preceding census of December 1834, it appears that, in the intermediate period of three years, an increase arose of 56,446 individuals, or 3·537 per cent.—3·709 per cent. of males, and 3·375 per cent. of females; which is for each year an increase of 18,815: that is 1·114 per cent. by additional births, and 0·065 by assumed immigration. This is the average rate of the “movement” of populations in central Europe. A recent statistical work, in two vols. 4to., on the Prussian District of Dusseldorf, shews that population, which in 1816 was 577,000, and in 1835, 720,760, to have steadily increased somewhat above 1 per cent. per annum by the excess of births over the deaths, throughout the intermediate period of 20 years. However, the disturbing effect of contingent circumstances causes the excess of births to range generally between $\frac{1}{2}$ and 3 per cent. By an excess of $\frac{1}{2}$ per cent. per annum, a population is doubled in 139 years; by 1 per cent. in 70 years; by $1\frac{1}{2}$ per cent. in $46\frac{1}{2}$ years; by 2 per cent. in 35 years; by $2\frac{1}{2}$ per cent. in 28 years; and by 3 per cent. in $23\frac{1}{2}$ years.

The whole area of the kingdom of Saxony contains 271·676 geographical square miles, and the total number of the population in 1837 was 1,652,114. There is therefore, on an average, 6,081 persons to each geographical square mile, for 1837; and for 1834, 5,873. Excluding the military, it is for 1837, only 6,023: and for 1834, 5,817. In three years there appears then to have been an increase of 208 to the square mile; and, excluding the military, an increase of 206*. The relative amount of the town and country inhabitants was, in 1837, as 1,000 of the former to 2,068 of the latter; and in 1834, as 1,000 to 2,108.

The proportion of males to females, in the whole population of 1837, including the military, was as 1,000 to 1,055; and, excluding the military, as 1,000 to 1,070. The proportion of males capable of bearing arms constitutes generally one-fifth part of the population.

With regard to the relative numbers of the different religious denominations, it appears that, on an average of the whole population, there are in 100,000 inhabitants—

Lutherans	98,081
Calvinistic Reformists	109
Catholics	1,755
Greek Church	4
Jews	51

Which, compared with the numbers in 1834, shews the increase of—

Lutherans	to be	35 in 1,000
Reformists	„	113 „
Catholics	„	28 „
Greek Church	„	200 „
Jews	„	2 „

* For the sake of comparison, it may here be stated that the whole area of the kingdom of Prussia contains 5,077·41 geographical square miles, and in 1837 the total population was 14,698,125; which is, on an average, 2,776 persons to each geographical square mile. In France, according to the last census of 1836, the number to each square mile (English) was, with the exclusion of Corsica, 166. In England, by the last census of 1831, there were 259 persons to the square mile; in Wales 108; in Ireland 243; and in Scotland 84.

Including the number of married persons living separate, and the military, there is something more than $\frac{7}{10}$ of the whole population married, or 342,565 in a million; that is, one marriage to 5.67 inhabitants.*

The number of children under the age of 14 years, in 1837, amounts to somewhat more than $\frac{1}{3}$ (in 1834 almost exactly $\frac{1}{3}$) of the whole population. So that, excluding the military, and the married persons living apart, there are, on an average, very nearly two children under 14 to each married couple; or to every 100 couples, 187 children under the age of 14.

With respect to the proportion of each sex among widowed persons living, it appears that, on an average in 100 of this class, there were, in 1837, 30 widowers, and 70 widows; and, in 1834, 29 widowers, and 71 widows.

The number of children placed out to be nursed and kept for pay (*Pensionaire und Ziehkinder*) constitutes $\frac{1}{4}$ part of the children under the age of six years. In Dresden there are 192, and in Leipzig 113.

The number of persons deaf and dumb is to the whole population as 1 to 1,401. (For 1834 as 1 to 1,579, and for 1832 as 1 to 1,334.) And the number born blind is as 1 to 3,878. (For 1834 as 1 to 4,924, and for 1832 as 1 to 3,675).

The Saxon Statistical Society publishes annually a very elaborate tabulated abstract of the local registries of births, deaths, marriages, and number of religious communicants, throughout the kingdom. The numerical statements exhibited in these interesting documents are methodically arranged in a form containing the following heads:—

Births.

Name of civil district, and of chief cities.†

„ religious denomination.

Legitimate and illegitimate children, male and female.

Twin births, distinguishing pairs of males, females, and births of one of each sex.

Number born dead, male and female.

Number, male and female, born in each month throughout the year.

Total births, male, female.

Amount of annual increase or decrease in each district, chief city, and religious denomination.

Comparison of each total amount with those of preceding years.

Deaths.

Name of civil district, and of chief cities.

„ religious denomination.

Number of children born dead, legitimate, illegitimate, male, female.

„ deaths at each of 12 periods of age, as shewn in the following abstract.—Page 110.

Total deaths, male, female,

Number of deaths, male, female, of persons married, widowed, divorced.

„ „ in each month throughout the year.

Increase or decrease of the number of deaths compared with those of the preceding year.

* In Prussia the proportion of the number married, in 1837, was something more than $\frac{1}{2}$ of the whole population, or 335,144 in a million.

† Of which the kingdom comprises four, namely, those of Dresden, Leipzig, Bautzen, and Zwickau.

Marriages.

Total number of marriages in the year.

Annual increase or decrease of marriages in each district and chief city.

Number of marriages of widowers and widows, and of persons divorced, male, female.

Comparison of each total with those of preceding years.

The following is the annual average number of births during the six years from 1832 to 1837 :—

	Males.	Females.
Legitimate . . .	28,472	26,625
Illegitimate . . .	4,453	4,246

Twin births, pairs of males 293, of females 259; one of each sex 255.

Births of three at once 7; born dead, males 1,716, of females 1,248.

Total of births, males 32,925, of females 30,871; of males and females 63,796.

The average numbers born in each month, and the total births in 1837, will be found below, compared with the numbers of contemporaneous deaths.

A comparison of the number of children born in 1837, namely, 64,593, with the total number of inhabitants at the same time, namely, 1,652,114, shews the fact of the birth of one child to 25·57 inhabitants.

In 1837 the number born was greater by 13,529 than the number of those who died. In 1836 it was greater by 18,532.

The excess of males over females born was, in 1837, 5·27 per cent.; and, on an average of the six years, 1832-37, it was 6·24 per cent.; that is, there were born to 100 males 94·76 females, or to 100 females 105·56 males. Generally the annual proportion of births of males to females is as 21 to 20; and the proportion of deaths of male to female children as 27 to 25, so that in the period of maturity the sexes are nearly equal in number.

Of the whole number born in 1837 the proportion born dead was 4·61 per cent.; in 1836, 4·76 per cent.; and the average of the six years, 1832-37, was 4·64 per cent.

The number of twin births, in the same sexennial period, was 4,835; the number of births of 3 at once, 44; in the year 1833 there were 15. The proportion of male to female children is, in the twin births, as 100 to 91·86.

In 1837 the illegitimate children born were to the legitimate as 1 to 6·2; in 1836 as 1 to 6·15; and to the total number born as 1 to 7·2. On an average of the six years the proportion of illegitimate to the legitimate is as 1 to 6·33, and is 2·15ths of the whole number born. In the sexennial period, 1836-37, there were, on an average, 5·5 illegitimate children to 1,000 inhabitants.* The number of illegitimate births is found to be greatly augmented by the existence of well-supported institutions for foundlings; and a remarkable confirmation of this assertion is furnished in the city of Mayence, where the abolition of the foundling hospital has been directly followed by an important decrease of illegitimate births.

Considering the number of births, with regard to different months, it appears that the greatest number, 6,002, occurred in January; and the

* In Prussia, in 1837, there were born 518,392 legitimate children, and 39,504 illegitimate; the latter being to the former as 1 to 13. In France, according to the last census, the proportion of illegitimate in the whole numbers of births was, in the department of the Seine, 31·3 per cent., that is, nearly $\frac{1}{3}$.

least, 4,470, in November; and this remark is equally applicable to the average of the six years. Indeed, it is a fact, confirmed by all carefully kept registers, that the greatest numbers of births are found in the first months of the year.*

The following comparison of the total numbers of births and deaths in each of the six years, 1832-37, exhibits the ratio of their annual difference of amount:—

	BIRTHS.			DEATHS.			Total Excess of Births.	Excess of Males to Females.		Increase or Decrease in each successive Year of	
	Males.	Fem.	Total.	Males.	Fem.	Total.		Born.	Died	Births.	Deaths.
In 1832	31,101	29,182	60,283	24,449	22,799	47,248	12,935	1,919	1,700	..	..
1833	32,355	30,444	62,799	25,838	24,265	50,103	12,696	1,911	1,573	+2,516	+2,805
1834	32,681	30,682	63,363	25,894	24,347	50,241	13,122	1,999	1,547	+ 664	+ 138
1835	34,360	31,852	66,212	23,155	21,885	45,040	21,172	2,508	1,270	+2,849	-5,201
1836	33,882	31,643	65,525	24,552	22,441	46,993	18,532	2,239	2,111	- 687	+1,953
1837	33,171	31,422	64,593	26,481	24,583	51,064	13,429	1,749	1,898	- 932	+4,071
Annual Average of the 6 Years.	32,925	30,871	63,796	25,069	23,387	48,456	15,323	2,054	1,683		

It hence appears that, on an average of six years, the annual numbers born are as 131·66 to 100 who die, and that the excess of deaths of males is, on the same average, 6·71 per cent.

Of the whole population in 1837 (1,652,114), the number who died in that year constituted more than $\frac{1}{32}$ part, or 3·09 per cent. In 1836 the proportion who died was $\frac{1}{37}$, or 2·87 per cent.

The number of children who, having escaped the perils of birth, died before the completion of their first year, was,—

In 1832	31·5	per cent. of the whole number born.
1833	33·4	„
1834	36·2	„
1835	34·4	„
1836	35·2	„
1837	33·28, or $\frac{1}{3}$	„
Annual average of the 6 Years.	34·	„

It is worthy of particular notice, that the mortality of children, from the age of 6 to 14, in 1837, as compared with that of 1832, exhibits a decrease of 50 per cent., and that the reduction is gradually continuous throughout the intervening period, thus:—

	Males.	Females.
In 1832	1,162	1,036
1833	1,089	1,059
1834	768	733
1835	608	621
1836	597	603
1837	553	546

* Dr. Guette, of Brussels, having made some curious investigations respecting the influence of day and night on human births, has found that in 19 years, out of 5,448 births, 2,949 occurred in the night, and 2,499 in the day. That the greatest numbers were at 11 in the night (358); and at 2 in the night (304); while the least numbers were at 7 in the morning, and 3 in the afternoon.

Under all the other periods of age the fluctuation of mortality is slight, and often very nearly stationary, so that in the instance, from 6 to 14, the great amount of reduction would seem to indicate the agency of some powerful cause of improvement.

Of the 64,595 born in 1837, there were,—

	Males.	Females.	Total.
Legitimate . .	28,569	27,059	55,628
Illegitimate . .	4,602	4,365	8,967

In the same year there died—

	Males.		Females.		Total.
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	
At Birth	1,425	295	1,035	225	2,980
In the 1st Year	7,812	1,547	6,359	1,246	16,994
Between the 1st and 6th Years	2,895	289	2,719	329	6,232

The proportion of the numbers born dead to the whole amount of deaths is as follows :—

	per cent.		per cent.		per cent.
1832	5.9	1834	5.96	1836	6.63
1833	5.5	1835	7.	1837	5.83

Annual average of the six years . . 6.12 per cent.

In the whole number born dead, the proportion of males to females is as 100 to 72.73. The proportion of the number of illegitimate to legitimate children born has been shewn to have been as 1 to 6.2, or 16.13 per cent.; and with regard to the number of each class born dead, that of the illegitimate is to the legitimate as 1 to 4.73, that is, 21 per cent.; shewing a rate of mortality greater by 5 per cent. among the illegitimate. The deaths before the completion of the first year shew 1 of an illegitimate child to 5.08 legitimate; and from the first to the sixth year (commonly the first of school-going) 1 to 9.08. Of legitimate children the proportion born dead is 4.42 per cent., and of illegitimate 5.8 per cent.

The numbers born, and those who died, in each month, on an average of the six years, 1832-37, are as follows :—

	BORN.		DIED.	
	Males.	Females.	Males.	Females.
January . . .	2,943	2,776	2,188	2,027
February . . .	2,703	2,555	2,264	2,210
March	2,851	2,684	2,421	2,268
April	2,720	2,546	2,429	2,221
May	2,746	2,568	2,353	2,211
June	2,639	2,457	1,929	1,774
July	2,791	2,560	1,902	1,710
August	2,753	2,537	1,999	1,817
September . . .	2,818	2,618	1,907	1,779
October	2,738	2,602	1,849	1,746
November . . .	2,589	2,445	1,879	1,780
December . . .	2,654	2,503	1,949	1,844

The greatest mortality in 1832 was in March; the least mortality, in October.

„	„	1833	„	May;	„	„	June.
„	„	1834	„	March;	„	„	November.
„	„	1835	„	April;	„	„	September.
„	„	1836	„	March;	„	„	August.
„	„	1837	„	February;	„	„	November.

The greatest proportion of deaths, in places having above 1,000 inhabitants, has been 1 to 18·5 persons. And here it may be remarked, that the statements exhibited in the works of some eminent writers that the ratio of mortality is always greater in the town than in the country population, is controverted by the Honorable Director of the Saxon Society, who says that, many of his own observations serve to prove the reverse. That the great advantages of pure air, athletic exercise, simple food, and exemption from habits of luxury, are often partially, if not wholly counteracted by the inferiority or deficiency of medical attendance in sickness, disregard of cleanliness, bad food, spirituous drinks, and excessive labour. That only in very large and densely populous cities the mortality exceeds the medium ratio; and that only in wealthy villages it falls below the medium: while throughout whole rural districts, where poverty and destitution prevail, the rate of mortality, instead of the general average of 1 in 34, is as high as 1 in 12. However, the present returns for Saxony exhibit results at variance with this assertion, for of the total number of deaths in 1837,—namely, 51,064,—18,070 occurred among the inhabitants of towns, comprising a population of 533,303; and 32,994 among inhabitants of villages and rural districts, comprehending a population of 1,102,887; shewing that the average ratio of town mortality was $3\frac{1}{2}$ per cent., and that of the country scarcely 3 per cent. In England the town and country populations are not separately registered. The returns of the last census, in 1831, confuse the numbers of inhabitants of towns with those of the parishes of which they constitute a part, so as to prevent the possibility of discrimination; for, in many instances, the parishes are of great extent.

In general the proportion born dead is considerably less in the country than in towns, especially in large and densely-populous capitals.

As the foundation of the science of life measurement rests upon the observed relation of the dying to the living, in given intervals of age,* the following comparative table of the numbers living, and of those who died at each age, will doubtless be considered important; and it is proper to observe that, in constructing it from the Saxon documents, the actual numbers living at the intermediate of the three successive triennial enumerations already mentioned (that is, in 1834,) have been assumed as approximating with sufficient exactness to the average annual numbers living in each of the six years. It may be added that, this assumption, for the purpose of furnishing correlative points of comparison, is fully justified by the usual practice of actuaries and other professional persons possessing great experience and knowledge of the principles of vital Statistics.

* Life Tables, by T. R. Edmonds, Esq., B.A.

AGE.	Numbers Living in 1834, assumed as representing the Annual Average Numbers in each of the 6 Years, 1832-37.		Average Number of Deaths in each of the 6 Years, 1832-37.		Annual Average Number of Deaths to 100 Persons Living.	
	Males.	Females.	Males.	Females.	Males.	Females.
From Birth to completion of 6th year .	122,788	124,222	12,153	10,259	9.90	8.26
From 6 to 14 years .	138,385	139,831	796	766	.57	.54
" 14 ,, 19 ,, .	78,207	82,386	422	403	.53	.48
" 19 ,, 21 ,, .	23,378	28,873	932*	1,009	.68	.65
" 21 ,, 30 ,, .	113,020	124,457				
" 30 ,, 40 ,, .	104,413	110,192	922	1,177	.88	1.06
" 40 ,, 50 ,, .	78,225	87,780	1,202	1,323	1.53	1.50
" 50 ,, 60 ,, .	63,345	67,555	1,885	1,919	2.95	2.83
" 60 ,, 70 ,, .	38,002	39,421	2,438	2,561	6.41	6.49
" 70 ,, 80 ,, .	13,153	13,394	1,904	1,998	14.47	14.91
" 80 ,, 90 ,, .	2,256	2,239	664	680	29.43	30.37
Beyond 90 ,, .	72	74	35	41	48.61	59.45

In 1837, the proportion of marriages (13,546) to the whole population (165,214) was 1.64 per cent.; in 1836 it was 1.63 per cent.

The greatest proportion (1 to 116 inhabitants) was in the district of Bautzen, and the least (1 to 124) in the district of Dresden.

Of the 162 marriages of parties differing in religious profession, in 1837, 69 were marriages of Protestants with Catholics. In 1836, by the death of married persons the number of marriages dissolved was 10,273; in 1837, 11,856; still the number of married couples exhibited an increase amounting to 3,273.

YEARS.	MARRIAGES.		Marriages of		Marriages of Persons Divorced.		Number of Marriages in which the Parties were of different Religious Profession.	COMMUNICANTS.	
	Total.	Compared with preceding Years.						Total.	Compared with preceding Year.
			Widowers	Widows.	Males.	Fem.			
1832	12,276	+ 564	1,925	878	158	149	313	1,648,371	+ 61,954
1833	12,832	+ 556	1,923	913	169	130	162	1,628,615	- 19,756
1834	13,305	+ 474	2,133	1,066	182	165	165	1,639,929	+ 61,314
1835	13,841	+ 535	2,203	1,070	212	174	154	1,656,977	- 32,952
1836	13,321	- 520	2,060	1,026	185	208	175	1,711,680	+ 54,703
1837	13,546	+ 225	2,190	1,022	208	162	162	1,665,740	- 45,940
Annual Average of the 6 Years	13,187	..	2,074	996	186	165	180	1,666,885	..

* In the registry of deaths the scale proceeds from 14 to 20, and thence to 30.

A general comparison of the registrations relating to Central Europe gives the following average results:—

	Births.	Deaths.	Marriages.
In villages . . .	1 to 23	1 to 40	1 to 115
Towns . . .	1 „ 27	1 „ 30	1 „ 105
Large capitals . .	1 „ 31	1 „ 25	1 „ 113

The proportion of females who give birth to children is, to the whole number of females in the population, as 1 to 18; and among married women as 1 to 6.

In concluding this abstract Report of the labours of the Saxon Society, it is impossible not to remark that, were similar documents prepared in other nations with the same care and completeness, the results would furnish data for the development of various general principles of great interest and utility in the improvement of social science, as doubtless the frequent uniformity and coincidence of many population phenomena are truly assignable to established and general laws, a knowledge of which is obtainable only by careful observations and classification of all the effects—that is, the positive numerical facts, and their constant relations. At the same time it may be useful to notice the very perplexing difficulty of instituting comparisons of numerical facts, when the forms of observation and registration adopted in different investigations are not coincident in their points of time, and conditions of classification, all legitimate inference being of course impossible where the terms of comparison are not correspondent, and this is the case in several parts of the tables from which the present abstract is derived. For instance, the living are recorded at the ages “from 14 to 19,” “19 to 21,” and “21 to 30:” while the scale of deaths proceeds from “14 to 20,” and from “20 to 30.”* The living also are distinguished into inhabitants of town and country, but in the record of deaths no such distinction is observed, though for the purpose of eliciting the different ratio of mortality of the town and country population it would offer a most interesting comparison. Neither do the returns contain the number of families to afford the means of ascertaining the average number of persons to each family, nor the number of paupers and persons insane. These, however, are defects which may in future be readily remedied; and doubtless the labours of the learned and zealous Director of the Saxon Statistical Society, Councillor Von Schlieben, and his honourable colleagues, can require no stronger incentive for the promotion of these desirable improvements than the full assurance of all such exertions being justly appreciated by many collaborators in England and other nations, where the Statistics of human life are studied with increasing attention, as mainly forming the exact elementary data from which all sound principles of social science can alone be deduced.

* In the Prussian circle of Dusseldorf the living are registered at regular decennial intervals, from 1 year to 90, while the deaths are registered at the ages of 1, 5, 14, 30, 50, 70, and 90.

An Account of Algeria, or the French Provinces in Africa.

[From Official Documents.]

BEFORE proceeding to describe the present extent and condition of the French provinces in Africa, it may be interesting to review the events which led to their acquisition, and the circumstances by which it was accompanied. So far back as the year 1520, in the reign of Francis I. the French entered into a treaty with the Dey of Algiers, which conferred upon them the exclusive privilege of fishing for coral on the coast of that country, and the permission to export annually a certain quantity of grain, and other produce. An association of merchants was formed at that time, which was known, as late as 1799, under the name of the "African Company." The first establishment founded by this body was the Bastion de France, situated between Algiers and Tunis, at about 300 miles from the former, and 126 miles from the latter place. This, however, was abandoned in the year 1690, on account of its offering no shelter for shipping, and a new station was founded at La Calle, about 12 miles to the eastward, which rose into a place of considerable importance, and continued to flourish until the year 1799, when the seizure of the property of the company, at the commencement of the expedition to Egypt, forced the inhabitants to abandon the town. All that they left behind was given over to pillage and destruction. In 1807, the French colonies were ceded by the regency of Algiers to the English, and were not restored to France until the general peace in 1816. The coral fishery then revived, and continued in full vigour until June 1827, when a public insult, offered by the Dey to the French consul, added to numerous violations of treaties and long-established rights, caused a sudden rupture between the two countries. The abandonment of La Calle, and its destruction by the Algerines, immediately took place. For three years the French blockaded the town of Algiers, but without success; the Dey resisted all overtures, and in one instance even fired upon a vessel bearing a flag of truce. At length, in the early part of the year 1830, the French government equipped a very large army (amounting in August to 37,357 men), which aroused the jealousy of the English government. Explanations were demanded, and, after a long correspondence, conducted with much evasion on the part of the French government, it was avowed, "that the king, no longer confining his projects to obtaining reparation for the particular wrongs done to France, was determined to turn to the advantage of all Christendom the expedition for which he was ordering the preparations to be made; and his majesty adopted, as the object and recompence of his efforts, the complete destruction of piracy—the total abolition of Christian slavery—and the suppression of the tribute which Christian powers pay to the regency." At the same time he disclaimed all personal interest, and expressed a desire, in the event of a dissolution of the Algerine government, "to concert with his allies for the purpose of deciding what should be the new order of things which might be substituted with the greatest benefit to Christendom for the system destroyed." Several remonstrances were offered, but eventually the expedition sailed, and, after a short resistance, the Dey capitulated on the 5th July 1830.

This success, however, gave the French only a single town; beyond

its walls they possessed no dominion, and the general hostility of the natives rendered their position full of difficulty and danger; it therefore became necessary for them to extend their conquests in order to maintain what they had already acquired. The subsequent progress of the French army is well known: after meeting with many reverses, and sustaining with great bravery very severe losses, it obtained, by the treaty of Tafna, executed with Abd-el-Kader, on 30th May 1837, an acknowledgment on his part of the sovereignty of France in Africa, with a definition of the limits of its dominion in the provinces of Oran and Algiers. The capture of Constantine on the 13th October, in the same year, accompanied by the destruction of the army and government of Bey Ahmed, completed the conquest of the remainder of the regency; all hostilities have now ceased, and France is occupied in securing her sway by the extension of civilization, the establishment of the means of internal communication, and the active promotion of commerce and national industry.

The regency of Algiers extended from the States of Tunis on the east, to the empire of Morocco on the west. Its boundary on the north was the Mediterranean; on the south the desert of Ssahlra. The Atlas chain of mountains traverses its whole length, running parallel with the coast; but descending from it to the sea, there are several parallel chains gradually diminishing in height: the last of them is called the Lesser Atlas.

Under the Turkish government the regency was divided into the four provinces of Oran, Constantine, Titery, and Algiers. The three former were beylicks, and governed by a Bey, who was a lieutenant of the Dey. The first, which was the most westerly, was bounded on the south by the Lesser Atlas, and was narrow in proportion to its length. The province of Constantine, which was the most eastern, was of about the same length, but its breadth was much greater. The province of Titery, which lay between the two former, extended from north to south on the several ranges of heights intersected by the Scheliff and its affluents. The limits of the province of Algiers were less certain, and depended upon the constantly fluctuating power of the Dey.

The present limits of the French possessions in Oran and Algiers were fixed by the Treaty of Tafna. In Constantine they are undefined; and Titery is left under the sovereignty of the Emir Abd-el-Kader.

In Algiers the boundaries are, on the east, the river Chiffa, and a line drawn from the confluence of that river with the Mazafran, enclosing Coleah and its territory; on the south, the summit of the first mountains, with the whole of the territory belonging to the tribes which inhabit them; and on the west the province of Constantine. The part to which, as yet, the occupation has more or less extended, consists of an almost isolated triangular cliff rising from the sea-shore, upon which the town of Algiers is built; of the plain of Métidja, running from north-east to south-west; and of the chain of the Lesser Atlas. The plain of Métidja is from 50 to 55 miles in length, and from 18 to 21 miles in breadth; it is well cultivated in the parts near the mountains, and marshy in the lower parts, and is but thinly inhabited. The northern side of the Lesser Atlas is covered with coppice and under-wood, principally consisting of the dwarf oak and mastich-tree.

None of the streams which flow through the territory of Algiers are or can be made navigable; most of them are but mountainous torrents flowing from the Lesser Atlas, and become dried up in summer. Some, however, as the Arrach and Mazafran, may become important for the purposes of irrigation.

The climate on the coast varies little from year to year. There are generally three seasons,—the temperate, which lasts from March to June, when the weather is fine and very agreeable in the neighbourhood of Algiers; the hot, from July to November, when the ground is dried up, the springs fail, and the whole country is scorched by the sun; and, lastly, the rainy season, which prevails from December to February, but is frequently interrupted by fine days. Fogs are common in the plain, but not at Algiers. The prevalent winds are the north and north-west, and the windy season is from November to April. The Simoon, here called Khamsin, is often experienced, and is most frequent in the month of September. The only two towns of size or importance in this province, besides Algiers, are Blidah and Coleah. The former is situated 36 miles S.W. of Algiers, and contained 7,000 inhabitants previous to the earthquake in 1825, which destroyed a large portion of the town. At present, however, it does not contain half that number. Coleah, to the north of Blidah, and west of the plain of Métidja, contains from 2,000 to 3,000 inhabitants.

The parts of the province of Oran which France has reserved are the towns of Mostaganem and Mazagran, with their territories, which are small, but situated on the coast; the towns of Oran and Arzew, with a district bounded on the east by the river Macta and the marsh in which it rises; on the south by a line drawn from that marsh, passing by the southern shore of the lake Sebkha to the river Salado (Oued-el-Maloh) in the direction of Sidi-Said, and thence to the sea.

There are two ports, Arzew and Mers-el-Kebir, the latter of which will admit the largest ships of war. The only considerable rivers in the reserved territory are the Rio Salado (Oued-el-Malah) and the Habrah. To the eastward, however, is the Schelliff, which is the largest river in Algeria. The climate is healthy in the environs of Oran. The prevailing winds are the N.W. and N.E. Hurricanes are frequent in the winter, but the simoon is rarely felt. The principal towns are Oran, which is about five miles from the port of Mers-el-Kebir; Arzew, which is of great importance as a port; Mostaganem, 25 miles by sea east of Arzew, containing, at the last census, 2,325 resident inhabitants, and 1,800 native auxiliaries; and Mazagran, five miles to the west of Mostaganem.

Of the three beylicks, the most extensive, the richest, and the most important, was that of Constantine, or the eastern. It is bounded on the east by the regency of Tunis, on the west by the provinces of Titer and Algiers, and on the south has no boundary, but extends to the desert of Ssahira. The length, following the sinuosities of the coast, is about 390 miles; its breadth sometimes 600, but may be stated to average 255 miles. The principal ports are Bougie, Bona, La Calle, Djigelli, Collo, and Stora; of which the three last are not at present occupied by the French. Several rivers intersect this province, the largest is the Seyhouse, which is navigable for a considerable distance from the sea. The climate varies greatly in different parts, even in

those not very distant from each other; there is sometimes snow at Constantine in the month of May, whilst the thermometer at Bona stands at 90° of Fahrenheit. The most prevalent winds are the N. and N. E., except at the two equinoxes, when the S. W. and N. W. set in suddenly, with heavy rains and storms. These generally occur in autumn, and sometimes last from September to the end of December. Constantine is not only the largest, but the most thickly peopled province of the regency. Besides the sea-ports already mentioned, there are several inland towns. Constantine, beyond the Lesser Atlas, 120 miles S. W. of Bona; Milah, containing from 3,000 to 4,000 inhabitants, 30 miles N. W. of Constantine; Setif, 90 miles E. S. E. of Constantine, on the road to Algiers; all flourishing towns, with several others less known. To the south is also Biscara, at 18 days' march from Constantine, with which a trade in corn and oil is carried on by means of caravans; and still further, beyond the Atlas, at 32 days' march from Constantine, is Tuggurt, situated in the desert. This town is the entrepôt for commerce with the interior of Africa, grain and European productions being exchanged for gold-dust, slaves, ostrich-feathers, and dates. Most of the tribes inhabiting this province unite agriculture to their pastoral pursuits. The fertility of the soil has long been remarkable; Strabo and Pliny bear testimony to it. Maize and millet are abundant; tobacco, the vine, and the olive, are cultivated with success. Cotton was formerly grown, and the soil is favourable to the mulberry-tree.

With regard to the population of these provinces, no well-founded estimate can be given. The town and suburbs of Algiers contained, in February 1838, 28,962 inhabitants, of whom 7,575 were Christians, 12,322 Mohammedans, 6,065 Jews, and about 3,000 Kabails, Mozabites, Biskris, Negroes, &c., to whom the census had not extended. The total European population of Algeria in 1837, exclusive of the military, was 16,770, of whom 9,824 resided in Algiers, 3,805 in Oran, 2,622 in Bona, 415 in Bougie, and 104 in Mostaganem. Of the total numbers, 6,592 were French, 2,193 English, 5,189 Spaniards, 1,983 Italians, and 782 Germans. The number of Spaniards has increased much more rapidly since 1830 than that of the French.

During the time of the deys, or pachas, as they were more generally called, the government was maintained solely by means of the militia, to which only Turks, Coulouglis (the children of Turkish fathers by Algerine mothers), and renegade Christians, were admitted; the Moors and Arabs were entirely excluded. The dey was elected by the captains of militia, generally after a revolt of that body, and the assassination of his predecessor. The province of Algiers was divided into seven outhans, or districts, the government of which was immediately under the agha, or commander of the troops. Under him were the kuids, or political officers, and the kadis, or ministers of justice; and under the former were the scheiks, or chiefs of the several tribes. The other provinces were governed by beys, who were appointed by the dey, and removable at his will. In the beylicks the organization was the same, but the kuids were called hakems. The task of government under this system was by no means easy. The Arab tribes who inhabited the plains acknowledged the power of the dey only when exposed to its violence, or desirous of obtaining its protection; and hence arose a continual contest,

accompanied with bloody chastisements upon the rebellious tribes. The Kabailles or Berbers, who are the remains of the aboriginal population, were still more refractory; they dwelt chiefly in the mountainous regions, and were much more attached to the soil than the Arabs, living in huts, cultivating the olive, and much farther advanced in agriculture and the arts than the Arabs. The greater part paid no tribute, and the rest only as much as they pleased; the sovereignty of the pacha over them was merely nominal. The force of regular Turkish troops in the regency at the time of the French occupation was 15,000.

At present the administration is entrusted to a governor-general and a board of subordinate officers, whose organization somewhat resembles that of the French political system. The towns of Algiers, Oran, and Bona, have each a municipal council, consisting in the first of ten French, six Musulme, and three Jews; and in the latter two of five French, three Musulme, and one Jew. The religion of the two latter classes is tolerated and protected by the government. It is true that a great number of the native mosques have been destroyed, and one which was voluntarily abandoned has been converted into a Christian church; but it is stated that there still remain a sufficient number for the wants of the population. The Jews were here, as elsewhere, a despised and persecuted race; they were not admitted into some towns, but in others were very numerous. In Algiers, according to the census of 1838, they formed one-fifth of the inhabitants.

The ancient Musulman judicature has been maintained for the trial of causes in which the natives alone are concerned, but French tribunals have been established, in which all causes between two foreign parties, or between a native and a foreign party, must be tried. The natives may use these courts if they prefer them. The muphtis and kadis of the native courts are appointed by the governor, and paid by the state: the ancient laws and forms are retained, but the judgment requires the countersign of the French procureur-general. Musulman assessors are appointed to each of the French courts, who are called in whenever one of the parties concerned in the cause is a native. There is also a Hebrew tribunal, consisting of three rabbins appointed by the governor, who have authority in religious matters, and in civil causes when the parties voluntarily come before them. The French courts consist of a tribunal of First Instance at each of the towns of Algiers, Bona, and Oran, with a Tribunal of Commerce, and a Superior Court at the former town. The following is a statement of the number of causes brought before the courts at Algiers from the 1st of October 1834 to the 31st of December 1837; the returns from Bona and Oran have not been received.

In the tribunal of *First Instance* :—

	Criminal Causes.	Civil Causes.	Correctional and Simple Police.
Causes entered for trial	2,084	4,815	..
„ Tried	1,543	4,104	2,947
Causes in which the parties were—			
Both Christians	1,405	2,893	1,568
Christians and Musulmen	63	631	..
„ Jews	89	281	..
Musulmen	1	23	983
Jews	19	108	396
Musulmen and Jews	16	163	„

In the *Superior Court*, civil causes entered, 449, judgment given in 365; of which 222 were between Christians, 110 between Christians and Musulmen or Jews, and 33 between individuals of the latter races.

Criminal causes entered, 107; persons charged, 154; acquitted, 46; condemned, all males, 108; of whom 61 were Christians, 36 Musulmen, and 11 Jews; 27 were French, 39 Europeans of other nations, and 42 natives.

The number of persons confined in the civil prison of Algiers during the same period was 890, of whom 533 were discharged without judgment, and 357 were tried. Of these 114 Europeans were condemned, and 30 acquitted; 153 Musulmen and 20 Jews were condemned, and 27 Musulmen and 13 Jews were acquitted: 269 were cases of theft, 16 of murder and attempts at murder, and 27 of cutting and wounding.

The number of causes tried before the Tribunal of Commerce was 3,377, of which 2,871 were between Europeans, 419 between Europeans and natives, and 87 between natives. There were 41 bankruptcies at Algiers during the same period.

During the five years, from 1832 to 1836, 4,306 individuals, of whom 72 were natives, have been brought before the military tribunals; 1,367 were acquitted, and 182 condemned to death, of whom 64 were executed. The number was much reduced in the two last years of the period. In 1833 it was 1,081; in 1834, 1,141; in 1835, 848; and in 1836, 491. The number of troops, French and native auxiliaries, in each year of the French occupancy, were,—

1831	17,939	||	1835	30,885
1832	22,431		1836	31,450
1833	27,762		1837	42,067*
1834	31,863			

The expense of this force in 1837 was 1,593,086*l.*, which is divided, in the French account, into expenses foreseen, amounting to 839,800*l.*, and expenses unforeseen, amounting to 753,285*l.* A comparison of the expense on peace and war establishments in that year is not stated; but in the preceding year, when the total charge amounted to 1,011,966*l.*, the excess of charge on account of the French troops, consequent upon a state of war, is given at 424,713*l.*, and the payment of the auxiliaries at 96,871*l.*

The Musulman religious institutions consist of the Mecca and Medina, the Marabouts or Zaouia, and the Mosques. The first is general to all Musulman countries, and took its origin in the early days of Islamism; its objects are to collect and convey to the Holy Cities the revenues arising from the properties alienated (*habous*) and donations made for that purpose: a portion of these revenues is also applied in Algiers to the relief of the poor, the redemption of Musulman slaves, and the maintenance of three Hanéfite mosques. The marabouts are edifices containing the tomb of a saint, in which pious Musulmen purchase the privilege of being interred: their number is very considerable, but only nineteen possess property. There are two classes of Musulmen in Algiers—the Turks are Hanéfites, and the Arabs are Malekites,—the former have 14 mosques, and the latter have 92. The *Andelous* is a charitable institution, originally founded

* Of these 5,825 were native auxiliaries.

for the relief of the poor Moors who fled from Spain, and is maintained for the assistance of their descendants. The Schorffas form another class of charitable establishments, possessing a small amount of property; but their objects are less known. There is also the Beit-el-Mahl, an officer charged with the protection of the interests of orphans, absentees, and of those of the state in certain kinds of property. The total revenues of the Mecca and Medina, in 1836, were about 4,000*l.*, arising from 1,419 properties of various kinds. Those of the mosques and other institutions were about 8,000*l.*, arising from 2,756 properties; the expenditure of the latter was about 6,880*l.* Only about half the mosques and marabouts are now devoted to purposes of worship, and a considerable portion of the property belonging to them has been destroyed or appropriated to the public service. Since the occupation these institutions have all been under the regulation of the French authorities, by whom the peculation which formerly existed in their management has been checked, and the revenue considerably increased.

Before 1830, the number of schools, Moorish and Hebrew, was considerable, but the instruction afforded in them consisted only of writing and reading the text of the Koran, or the Bible, and this was entirely confined to boys, the females being brought up in total ignorance. Since that period the number has much decreased, owing to emigration caused by the French occupation; but there are still at Algiers from 20 to 25 such schools, conducted upon the same system. The French Government has established a department of public instruction, and has done much to supply the wants of the European population, and to introduce an improved system of education among the natives. A college has been founded at Algiers, in which the French and Arabic languages, the classics, geography, history, and the physical and mathematical sciences are taught. The number of students, in 1837, was 115. There have been established at the same place an Arabic chair, attended, in 1837, by 40 students; a school of mutual instruction in French, writing and arithmetic, containing 172 pupils; and a Mauro-French school, conducted by a native, and attended by 60 Moorish youths, for the purpose of learning the French language, and preparing to receive the elementary instruction given in the other schools. At Oran and Bona, also, there have been established schools of mutual instruction, and schools for young Jews; the former class contains 110 pupils at the two places, and the latter 65. At Delhy-Ibrahim, about nine miles from Algiers, there is also a school for mutual instruction, containing 52 scholars; and at Kouba another has been commenced. The schools of this class contain a considerable number of Jews, but few Moors, whose absence is attributable to the presence of the Jews, and an apprehension of proselytism. So far does this fear operate, that Moorish children have refused to wear the decorations of merit which they have obtained in the schools, lest they should be suspected of having become Christians. The Arabs have not yet acquired any desire for instruction; but experience shews that they have no insuperable aversion to the French language. In the school at Delhy-Ibrahim, two-thirds of the scholars are French children, and one-third are Arabs in the auxiliary corps of Zouaves. A school for

Jewish girls, and another for Moorish adults, have been established at Algiers; the former contains 68, and the latter 25 scholars. There are also several private schools in each of the towns already mentioned. The total number of scholars in the French schools, founded since 1830, are as follows:—

In 1832 . . .	173	In 1835 . . .	644
1833 . . .	537	1836 . . .	796
1834 . . .	563	1837 . . .	1,202

Of this last number 885 are Europeans, viz., 556 boys and 329 girls; 90 are Moors, and 227 are Jews, of whom 81 are girls. The native schools, in the occupied districts, contain 1,085 boys, of whom 445 are Moors, and 640, or two-thirds, are Jews.

It is difficult to determine what was the real state of agriculture in this country before 1830. Near the towns it was not pursued at all; the fields were left uncultivated, and the olive grew wild without grafting. The plain of Métidja, near Algiers, presents in several parts traces of cultivation in former times; but its insalubrity, and its proximity to the Turks, prevented any great extension of culture. In the French expeditions, however, both to the west and east, particularly to the latter, remarkable proofs presented themselves of the attention bestowed upon agriculture by the Arabs, and especially by the Kabails. Its progress, since the conquest by the French, has been very rapid in Algiers, but less so in the other provinces. The extent of land in the communes already formed within the province of Algiers, in 1837, was 48,714 acres; of which 16,644 were under cultivation, 10,337 were not fit for cultivation, and 21,734 were fit, but as yet were uncultivated. Of the cultivated land, 4,845 acres were cropped with wheat, and 4257 with barley; 883 were planted with vines, and 5000 acres were meadow.

At Oran the country is unfavourable; but of 660 acres fit for cultivation 377 are cultivated; the total extent at present occupied is only 1,100 acres. At Mostaganem, out of 1,380 acres 1,050 are cultivated. At Bona, out of 29,490 acres, of which 20,717 are fit for cultivation, only 1,433 are cultivated, although this province has for a long time enjoyed greater tranquillity, and possessed a larger garrison than any of the other provinces. The French report attributes this want of agricultural activity to the circumstance of a large extent of land being held by a few colonists—17,131 acres by 14 individuals—of which extent only 493 acres are cultivated; while out of 201 acres held by 12 proprietors, 125 are cultivated. In Algiers there are very few large proprietors. In this province the government established a nursery garden in 1832, for the purpose of propagating the trees and plants most useful, and best adapted to the soil and climate. Its present extent is 55 acres, and in 1838 it contained 87,038 young trees and shrubs.

The average price of wheat at Algiers, in 1837, was 7s. 7½d. per sack of 100 lbs.; and of barley, 4s. 0¾d. Flour of the first quality was 28s. 11d. per barrel of 193 lbs.; bread 1s. 8d. per 11 lbs.; beef and mutton 3¾d. per lb.; fowls 1s. a piece; potatoes 4s. 2d. a cwt.; wood for fuel 3s. 9d. the ass load; wine 45s. for 50 gallons. The other markets are generally higher. The consumption of cattle by the army, in 1837, was as follows: 8,290 oxen, 2,195 cows, and 2,049 sheep and goats:

these were almost wholly the produce of the country. The consumption of the civil population of Algiers during the same year was 7,160 oxen and cows, 370 calves, 27,323 sheep, 2,743 lambs, and 782 pigs. The quantity of wheat and wheat-flour brought into the same town, during 1837, was equal to 65,280 quarters; of which, 28,275 quarters were imported from abroad, 10,048 quarters entered coastwise, 5,278 quarters brought in by land, and 21,676 quarters consisted of flour imported from France and Italy. The quantity of olive oil offered for sale in the same year was 150,150 gallons, of which only 2,005 gallons were brought in by sea.

A people which had so little communication with foreign nations, and was so deficient in the arts and sciences of civilized life, could possess but little commerce or native manufactures; the latter consisted almost entirely of articles of clothing. Woollen-stuffs, used for the long-hooded cloaks, and for tunics worn by the natives, were woven by the Arab women in their tents. All other manufactures were carried on in the towns and large villages, some of which were renowned for the beauty of their productions, consisting of silk-stuffs, carpets, muslins embroidered with gold or silver, morocco leather, and fringes for clothing and the furniture of horses. These, with the trades connected with building, the working of metals, and the wants of civil life and of war, were the sole industrial occupations under the Regency. In the towns occupied by the French some of the above manufactures have declined, others have been greatly improved by the imitation of foreign productions. There existed but few water-mills, and those very badly constructed; the corn was usually ground in the towns, and the moving power was supplied by horses. It is stated that the Kabailles, who are adepts in working metals, possess the art of smelting iron, which they extract from the mountains in the neighbourhood of Bougie; but this requires confirmation. It does not, as yet, appear that any mines have been worked, although some are known to exist—of iron, in the mountains between Algiers and Bougie; of gold, at Fren dah; and of copper, between Blidah and Médéah. The French Government has not yet undertaken to work them, but will not permit other parties to do so. There existed in the towns a certain number of fondouks and bazaars, in which the producers of the interior and the merchants of foreign goods openly sold their wares. Outside the towns there were established, in inhabited spots, conventional markets, in which the Arabs met, always armed, to traffic. Since the French occupation, the interior of the towns having become more secure than the country, the Arabs attend the city markets. Traffic of all kinds was carried on by the Moors and Jews; the latter alone dealt in the precious metals, and were parties to almost every transaction. Credit and all substitutes for specie were unknown, except, perhaps, among the Jews in commerce between themselves. The various handicrafts were, for the most part, divided among several classes, who possessed in some degree the exclusive privilege of exercising them. The Mozabites were butchers, millers, bakers, and bagnio-keepers. The Biskris were porters and guards in the shops. The negroes, generally free, but sometimes slaves, were porters, assistants to masons, and whitewashed the houses. The Kabailles furnished the day-labourers, gardeners, and workers in the

fields. The Moors were tailors, embroiderers, weavers, dyers, shoemakers, and turners. The Jews were goldsmiths, jewellers, lapidaries, money-changers, &c. Notwithstanding the changes caused by the immigration of Europeans, the same divisions of employment continue among the natives, and some have even been confirmed by recent regulations.

Commerce, under the Regency, was exposed to great difficulties, and could only be carried on with the consent of the Government. The duties on importation nominally varied from 5 to 10 per cent., according to the origin of the goods, and the degree of favour accorded to them by conventions. But these were not always respected, and the foreigner, always considered as an enemy, often escaped ruin solely by means of the presents with which he purchased the protection of the Prince and the authorities. The State monopolized the greater portion of the productions of the country; exportation could only be carried on by means of licenses, the charge for which was proportioned to the quantities to be exported, and constituted therefore an actual export duty. No records of the amount of commerce thus carried on were kept, but the following facts, in some degree, shew its extent. Before 1789 the French African Company purchased considerable quantities of grain upon the coast, principally in the province of Constantine, which it sold in the south of France, Spain, and Italy; this was one of its greatest sources of profit. From 1792 to 1796, the southern provinces of France were supplied with corn from the Regency. From the port of Arzew alone, from 250 to 300 cargoes were annually imported; and, in 1814, 40,000 oxen were shipped thence for the use of the English army in Spain. The imports of the Regency at that period amounted to about 88,000*l.*, of which half was brought from France. In 1822 they had risen to 260,000*l.*, of which France supplied 60,000*l.* The imports consisted of silk, woollen and cotton stuffs, raw silk, colonial produce, hardwares, haberdashery, jewellery, iron and steel. Cotton goods, of which the consumption was considerable, had long been furnished exclusively by Great Britain; the silks were brought from Italy; the woollens from France and England; coarse hardware chiefly from the latter country; and the trade in the remaining articles was equally divided between England and France. The exports consisted of grain, cattle, oil, wool, hides, and wax. They had long been declining, and in 1822 did not exceed 60,000*l.* It is stated, however, that in 1829, one merchant shipped from Oran to Gibraltar 24,500 quarters of wheat and barley, and as much more to other parts, together with 3,000 head of cattle.

Since the conquest the French have established a system of customs, of which the following is an abstract. No importation is prohibited; all French goods, and those of foreign countries not produced in France, or necessary for food, agricultural pursuits, or building, are admitted duty-free. Foreign merchandise, not prohibited in France, is charged with one-fourth of the duty fixed upon importation into that country when it is imported from foreign ports, and with one-fifth when imported from a French port. Articles prohibited in France pay a duty of 15 per cent. *ad valorem*. Merchandise exported to France pays no duty; exports to other countries pay the export duty fixed by the French tariff, excepting grain and flour, upon which there is no duty.

With respect to navigation, the intercourse with France and the coasting trade are confined to French vessels. The African sandales, however, of less than 30 tons, are admitted to the latter. The tonnage-dues on foreign vessels are 2 francs per ton; French vessels are free.

The Customs' accounts of imports and exports in Algiers cannot be much relied upon before the year 1835. In 1831, however, they gave an importation of 260,160*l.*, and an exportation of 59,184*l.* In 1835 the former had risen to 671,149*l.*, and in 1837 it amounted to 1,322,210*l.* The exports were 103,914*l.* in 1835, and 117,867*l.* in 1837. Of the imports it was estimated that 400,000*l.* was for the use of the army. Of the merchandise entered for consumption in 1837, five-eighths were imported from France, and three-eighths from foreign countries. In 1836 the proportion was as 11 to 8, and in 1835 as 8 to 7, shewing an increased proportion of imports from France. With regard to the articles imported in 1837, 260,610*l.* consisted of farinaceous food; 219,648*l.* of woven goods; 156,950*l.* of liquors; 107,010*l.* of live animals; 69,472*l.* of the produce of animals; 66,132*l.* of timber; and 42,726*l.* of colonial produce. The importation of woven goods from France has increased in a greater proportion than that from foreign countries; the former amounted to 33,259*l.* in 1835, and to 75,100*l.* in 1837; the latter to 78,670*l.* in 1835, and to 128,943*l.* in 1837. The importation of French cotton goods had doubled within the same three years from 12,630*l.*, in 1835, to 26,160*l.* in 1837; while that of foreign cottons had only risen from 87,212*l.* to 100,841*l.* The French manufacturers have succeeded in imitating the cotton stuffs used by the Arabs, which were formerly peculiar to England; and to promote this competition the French Government has supplied them with patterns of the required stuffs. The import trade of the several ports was as follows in 1837:—Algiers, 696,197*l.*; Oran, 352,184*l.*; Bona, 259,209*l.*; and Bougie, 14,619*l.* The trade of the ports of Arzew, La Calle, and Mers-el-Kebir was inconsiderable, and is not included in the above. The total duties on imports amounted to 33,385*l.* Of the total exports in 1837, less than one-half, or 49,895*l.* out of 117,867*l.*, were destined for France. The chief indigenous productions exported were coral, to the value of 46,540*l.*; hides, 26,742*l.*; grain, 5,305*l.*; and wax, 4,128*l.* The export trade at Bona was 56,840*l.*; at Algiers, 35,700*l.*; at Oran, 23,939*l.*; and at Bougie, 1,384*l.* The above statements do not include the trade carried on between the ports occupied by the French and the ports belonging to the Arabs. The imports into the former from the latter amounted, in 1837, to 26,335*l.*; the exports to 12,479*l.* The inland trade with the Arabs cannot be accurately stated, but it was estimated, in 1837, at 200,000*l.* of Arab produce bought, and the same amount of European goods sold in return.

The number of vessels which entered the ports of Algiers in 1831 was 338; of which 123 were French, and 215 belonged to other foreigners. In 1837 the total number had risen to 3,365, measuring 228,077 tons; of these 1,129, measuring 100,202 tons, were French; 1,204, measuring 114,664 tons, were foreigners; and 1,032, measuring 13,211 tons, were Algerine sandales. The following was the number of ships which entered each port in the same year:—

	Vessels.	Tons.		Vessels.	Tons.
Algiers . .	905 . .	71,762	||	Arzew . .	307 . .
Oran. . .	880 . .	64,006		Bougie . .	292 . .
Bona. . .	712 . .	61,385		Mostaganem	269 . .
					4,026

The number of sandales registered, in 1837, in the Algerine ports already occupied, was 170, in those not occupied, 39; their total tonnage was 2,037; their crews, 1,186. The number of boats engaged in the coral fishery had risen from 62 in 1832 to 245 in 1836. The duties received in the latter year amounted to 9,688*l.* Of the 245 boats, 122 are Neapolitans, 79 Tuscans, 31 Sardinians, 1 Spanish, and only 10 French. All but 10 are stationed at Bona. The total revenue received by the French had risen from 37,188*l.*, in 1831, to 121,551*l.* in 1837. The several sources are as follows:—Customs and various taxes, 58,825*l.*; registration and state domains, 15,038*l.*; post-office and steam-vessels, 6,488*l.*; sale of gunpowder, 369*l.*; other revenues, applicable to municipal and other particular purposes, 40,850*l.* The combined municipal receipts of the towns of Algiers, Oran, and Bona, was estimated, for 1837, at 36,720*l.*; their expenditure at nearly the same sum.

The preceding account affords a necessarily brief view of the past and present condition of the French provinces in Algiers. For further information, the Report of the French Minister of War, laid before the Chamber of Deputies in February 1838, may be consulted. It is to be regretted, that this work does not afford the means of estimating the sacrifices which France has made to obtain these colonies; no statement is given of the sums spent, nor of the lives lost in the conquest; but the documents prove most clearly the importance which that country attaches to these possessions, and the advantages which they are likely to confer on French commerce and French power in the Mediterranean; and they shew more than enough to justify even a stronger feeling of jealousy than that expressed by the British Government in its despatches before the expedition in 1830. R.

PROCEEDINGS OF STATISTICAL SOCIETIES.

STATISTICAL SOCIETY OF LONDON.

Fourth Ordinary Meeting, Monday, 18th February, 1839.

Sir Charles Lemon, Bart., M.P., Vice-President, in the Chair.

The following Gentlemen were balloted for and elected Fellows—

The Right Hon. Sir Robert Wilmot Horton, Bart.

John Robinson Maclean, Esq., C. E. 7, Delahay Street.

Trevelyan James, Esq., Castle Baynard.

The Report of the Auditors of the Society's Accounts for 1838, with the Balance-sheet of Receipts and Expenditure, were read. These documents will be appended to the Annual Report.

A Paper was read on the Statistics of the Populations of the Kingdoms of Saxony and Belgium. By W. R. Deverell, Esq. (*See page 103.*)

The following Gentlemen were proposed—

William A. Guy, M.B. Cantab. Professor of Medical Jurisprudence, King's College.

Alexander Johnston, Esq., Bailie of the City of Glasgow.

Bernard Hebel, Esq., 15, York Place, Portman Square.

Henry Reeve, Esq., 9, Chapel Street, Grosvenor Place.

Henry John Baxter, Esq., 12, Guildford Street, and Middle Temple.

An Analysis of Bankruptcies in England and Wales, shewing the Counties and Trades in which the same occurred, during each Month, from October to December, 1838, and during the Year 1838.—(In continuation of Account at vol. i., page 448).

COUNTIES.	Oct.	Nov.	Dec.	Total of Yr.	TRADES.	Oct.	Nov.	Dec.	Total of Yr.
Bedford . . .	..	..	..	..	<i>Persons connected with</i>				
Berks . . .	..	..	..	11	<i>Manufactures.</i>				
Bucks. . .	..	..	..	1	Cotton Trade . .	2	3	1	21
Cambridge . .	..	..	1	3	Woollen do. . .	..	1	..	11
Chester . . .	2	1	1	15	Silk do. . .	..	..	..	3
Cornwall . .	1	..	..	8	Linen do. . .	..	1	..	4
Cumberland . .	..	..	..	6	Iron do. . .	..	..	1	20
Derby . . .	..	2	..	10	Building do. . .	3	3	5	52
Devon . . .	..	2	4	20	Miscellaneous . .	3	1	4	76
Dorset . . .	1	..	..	9					
Durham . . .	1	1	..	8	<i>Agriculture.</i>				
Essex . . .	..	2	4	19	Farmers . . .	..	..	..	3
Gloucester . .	1	1	..	39	Corn, Hop, and Hay Dealers . .	1	1	4	30
Hants. . .	..	3	..	15	Cattle and Wool Dealers . .	..	1	1	18
Hereford . .	1	..	1	9	Coaches & Horses . .	1	1	1	14
Hertford . .	1	..	..	6	Brewers, Maltsters, & Distillers . . .	..	2	2	23
Huntingdon . .	..	..	..	..	<i>Other.</i>				
Kent . . .	2	1	2	32	Imkeepers and Victuallers . .	8	4	8	93
Lancaster . .	8	7	6	99	Merchants, Warehousemen, Agents, Brokers, and Wholesale Dealers . .	2	10	7	129
Leicester . .	1	1	1	9	Tradesmen, Shopkeepers, and Retail Dealers . .	26	32	19	300
Lincoln . . .	..	1	..	12	Miscellaneous . .	1	3	2	46
Middlesex . .	13	18	14	187					
Monmouth . .	..	1	..	6					
Norfolk . . .	1	2	..	14					
Northampton . .	..	..	..	8					
Northumberland . .	2	..	..	8					
Nottingham . .	..	..	1	12					
Oxford . . .	..	..	..	6					
Rutland . . .	..	..	..	..	
Salop . . .	..	..	1	5					
Somerset . . .	1	1	1	12					
Stafford . . .	2	1	1	20					
Suffolk . . .	1	..	1	7					
Surrey . . .	..	5	2	23					
Sussex . . .	..	2	2	17					
Warwick . . .	2	5	4	58					
Westmoreland . .	..	..	..	..	
Wilts . . .	..	..	..	5					
Worcester . . .	..	..	..	11					
York . . .	5	6	5	93					
Wales . . .	1	..	3	20					
Total . . .	47	63	55	843	Total . .	47	63	55	843

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 5th January and 5th February, 1839.

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
8th January .	£. 18,201,000	£. 10,315,000	£. 28,516,000	£. 21,680,000	£. 9,336,000	£. 31,016,000
5th February	18,252,000	10,269,000	28,521,000	22,157,000	8,919,000	31,076,000

Aggregate Amount of Notes circulated in England and Wales by Private Banks and by Joint Stocks and their Branches respectively, in each of the Quarters ended 29th September and 31st December, 1837 and 1838.

Quarters ended	1837			1838		
	Private Banks.	Joint Stock Banks.	Total.	Private Banks.	Joint Stock Banks.	Total.
29th September	£. 6,701,996	£. 3,440,053	£. 10,142,049	£. 7,083,811	£. 4,281,151	£. 11,364,962
31st December	7,043,470	3,826,665	10,870,135	7,599,942	4,625,546	12,225,488

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week of the Month of January 1839.

	Weeks ended January				Average of the Month.
	4th.	11th.	18th.	25th.	
Wheat—Weekly Average .	s. d.	s. d.	s. d.	s. d.	s. d.
,, Aggregate Average	80 2	81 6	81 4	79 3	80 6
,, Duty on Foreign .	77 3	78 8	79 8	79 9	78 10
	1 0	1 0	1 0	1 0	..
Barley	38 3	40 4	42 4	42 5	40 10
Oats	26 10	26 8	26 9	27 6	26 9
Rye	52 0	51 11	52 4	49 3	51 4
Beans	41 11	41 8	42 1	41 8	41 10
Peas	43 11	42 5	43 5	42 0	42 11

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and remaining in Warehouse, and the Monthly Average Prices of British Wheat, in the Months ended 5th December, 1838, and 5th January, 1839; and also in the Year 1838.—(Continued from vol. i. page 510).

Months ended	Monthly Average of Prices of British Wheat, Regulating the Duty.	WHEAT.			WHEAT-FLOUR.		
		Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty	Remaining in Warehouse at the end of the Month.
5th December, 1838	s. d. 69 0	Imp. Qrs. 41,203	Imp. Qrs. 489	Imp. Qrs. 52,535	Cwts. 29,951	Cwts. 23,819	Cwts. 16,854
5th January, 1839.	75 0	212,583	259,480	6,403	71,999	62,043	25,806
Total of Year 1838 { Foreign	..	1,240,137	1,731,555	..	356,855	313,312	..
Colonial	..	1	7,748	..	53,306	76,854	..

[The Statistical Society of Ulster has held four meetings since the 1st November, an account of which is necessarily deferred to the next number.]

JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

APRIL, 1839.

Fifth Annual Report of the Council of the Statistical Society of London. Session 1838-39.

THE Council appointed for the past year have the pleasure of laying before the Fellows of the Society the usual Report of proceedings since the last General Anniversary Meeting; and they would accompany it with an expression of gratification at being able to state that, the general feeling now manifested in favour of statistical studies throughout the kingdom has obviously verified the fact which, in their Second Annual Report, they ventured to anticipate—"that the fruits of this Society will become visible in a spirit of research awakened among its members, in the establishment of corresponding societies, and in the creation of a public as well as an individual interest in its proceedings." In evidence of this it may alone suffice to mention a widely extended and increased amount of correspondence with several recently formed provincial societies, as also with individuals engaged in various statistical researches at home and abroad, and a large additional accession to the number of the Society's members.

From these sources many valuable communications of statistical documents have been received; and several distinguished foreign members of the Society, as M. Quetelet, M. Guerry, Count Serristori, Herr Hoffman, Dr. Julius, and others, have promised to contribute the various results of their statistical studies.

In adverting to the principal inquiries which have occupied the attention of the Council during the past year, and which for the most part are the same as those of which the nature and objects were explained in the last Report, the operations of the Committees require to be first noticed, especially of that on Education, which has constantly been engaged in the investigation of the number, nature, and condition of the schools in several extensive districts of the metropolis.

Since the last Anniversary Meeting, two further Reports of this Committee have been published in the Society's Journal, exhibiting the condition and capabilities of schools in the parishes of St. John, St. Margaret, St. Anne, St. James, and St. George, in Westminster; and completing the inquiry in that extensive and important portion of the metropolis, of which the population, according to the last census, in 1831, was 201,842. The Committee has subsequently continued its operations throughout the principal parts of the borough of

Finsbury, comprising the parishes, wholly or partially, of St. Luke, St. John, St. James Clerkenwell, St. Andrew, St. Peter, St. Sepulchre-without, St. Botolph, St. George, Bloomsbury, St. George the Martyr, St. Pancras, and Islington. All the schools in this extensive district, amounting to nearly 600, have been completely examined, and the classified results are in a forward state of preparation.

The sum expended in carrying on the inquiries of this Committee during the past year is under 95*l.*; confessedly a small amount compared with the satisfactory accomplishment of an object of such magnitude and interest as that of procuring a minute and correct account of the real state and means of education among the metropolitan population. For such information must be regarded as a near approximation to the absolute truth, and is therefore of the highest importance as supplying the evidence required for legislative proceedings, and furnishing a guide to all benevolent efforts for alleviating the evils of popular ignorance. It must then be gratifying to the Society to find that, the Committee's First Report received the attention of the Parliamentary Committee on Education, by which it was noticed with expressions of commendation.

In reviewing the progress of the Education Inquiry, the Council cannot omit to express their acknowledgment of the active and zealous services of the Rev. Mr. Edgell, by whose personal labour and liberal assistance the useful objects of the Committee have been greatly promoted.

The Committee on Vital Statistics continues to be engaged in collecting various data from which may be deduced the laws that govern the rate of human mortality. With regard to one of the earliest, and a very important object of its proceedings, namely, a collection of the experience of the numerous Assurance Societies established in the United Kingdom, the Council have the satisfaction of stating that, the circulation of the Committee's Forms among the several offices has had the effect of inducing the members of a Committee of Actuaries to renew the prosecution of a previously contemplated plan for collecting the desired information. In consequence of this proceeding, combined with the circumstance of many of the Assurance Societies having preferred to communicate their experience to the Committee of Actuaries, this part of the general inquiry contemplated by the Society's Committee has been in a great measure relinquished, and attention has since been directed to other points of the subject of Vital Statistics. The Committee of Actuaries possess peculiar facilities for the task they have undertaken, and they have given the strongest assurances of their having in view the same object as the Society's Committee, to which they have promised to communicate the information they collect.

The Committee has been more immediately successful in the applications which it has made to the principal public medical institutions in the kingdom, from some of which extensive and valuable returns have been promised. The medical officers of these establishments, especially of those in the country, have in general manifested a laudable readiness to furnish such information as could be obtained from their respective registers; but as the preparation of numerical returns of this nature requires much attention and labour, the collection of such documents, in

sufficient number to admit of general deductions, must of necessity occupy a considerable period of time.

In many institutions difficulties are frequently found to arise from deficiencies in the mode of registration hitherto followed. With regard to this essential point it is gratifying to the Council to state, that in several instances the forms of registry proposed by this and other Committees of the Society have been adopted in important public institutions—a fact which, as tending to produce a systematic completeness and uniformity of future results, is alone sufficient compensation for the labour of planning judicious forms of registration.

The Committee is at present engaged in considering the means of procuring from other sources a variety of information respecting the duration of human life, and the circumstances by which it is influenced. It has also drawn up, under the direction of the Council, some suggestions for the attainment of greater perfection in the mode of effecting the next census of the population of the kingdom in 1841.

The Medical Committee has prepared a very complete tabular form for the record of Coroners' Inquests, which has been transmitted by the Council to the Secretary of State for the Home Department, with such a representation as they hope will lead to its adoption in the Bill for the regulation of the office of Coroner, which is about to be brought before Parliament.

Since the last Annual Meeting, the Committee on Strikes among the Working Classes has received some additional returns to its printed paper of queries, and several others have been promised. For these the Committee consider it desirable to wait, before they proceed to report upon the subject.

A Committee has been appointed to inquire into the condition of the working classes in the parishes of Westminster, and its operations have commenced by the employment of a paid agent, who is investigating the parish of St. Anne, Soho.

The Council have next to notice one of their most important transactions during the past year, namely, the commencement, on the 1st of May, of a periodical publication, entitled the "*Journal of the Statistical Society of London.*" The establishment of such a periodical, as furnishing a vehicle for the prompt and convenient circulation of documents deemed worthy of the Society's attention, was considered by the Council an advisable mode of accomplishing one of the principal ends proposed at the foundation of the Society; for, by adverting to the prospectus of its objects and plan of operation, it will be seen that the collection of new statistical materials is intended to form only one part of the Society's work; and that, to condense, arrange, and publish those already existing, but either unpublished or published only in a diffuse or expensive form, or in foreign languages, is declared to be a task of equal usefulness.

In the adoption of this measure, the Council were further encouraged by an offer on the part of Messrs. Knight and Co. to take upon themselves the risk of the publication for one year, upon the condition of the Society's engaging to take 500 copies of each number, at two-thirds of the sale price, that is, one-ninth less than the price to the

trade. By this arrangement the expense to the Society for the first year was limited to 300*l.*, which could not, by any contingent circumstances, be exceeded; and Messrs. Knight and Co. further engaged that, should the publication become remunerative, they would share with the Society any profit that in future might accrue from its sale. This offer was accepted by the Council, who appointed a Publication Committee to direct the selection of papers for the Journal, and to superintend its management.

That the end proposed by the Council has been in some measure attained, can hardly be doubted, as the Journal has been the means of extending a knowledge of the proceedings of the Society throughout this and foreign countries in a manner that otherwise could not have been effected. The Society has since been joined by a number of new members, which, compared with those previously elected during any similar period, is more than three to one. Communications made to provincial Statistical Societies have been contributed by several of those bodies, with the expression of a desire to adopt the Journal as the channel of their publications; while the use which has been made of its contents in Parliament and other public meetings, may be regarded as testifying the credit which it has generally obtained.

The Council would earnestly impress upon the Members of the Society at large, the necessity of their zealous co-operation in promoting the useful objects for which they are associated; and with regard to the means of procuring for the Society this important advantage, on which its ultimate success or failure is greatly dependent, they would reiterate the anxious recommendation expressed in their Third Report, that such information should be furnished as accrues from the daily and professional occupations of all members connected with public institutions, or the employment of large numbers of the working classes. The communication of information respecting the existence of statistical records and documents not generally known; and the transmission to the Society of all reports of public institutions, exhibiting numerical facts relating to the social interests of this and other countries, would be a service especially worthy of the Society's thanks.

The Council are of course always desirous to receive any judicious proposition of inquiries to be undertaken, or of expedients to be adopted for the more efficient promotion of the Society's prosperity and usefulness; and while they are deeply sensible of the high responsibility attached to them, they would state that, however well directed may be their endeavours, in order to render them most effectual, it is always not only desirable but necessary to have the assistance of the members at large. For this purpose they introduced, in the year 1837, a rule by which any number of Fellows might associate and use the facilities which the Society possesses, and the means it can exert for the prosecution of any useful inquiry. Only one committee however has been formed under this rule.

In proceeding with the usual topics comprised in the Annual Report, the Council have now to state that the Society's accounts have been examined by the auditors appointed for that purpose, in accordance with the Regulations. Their Report, with a balance-sheet of Receipts

and Expenditure, were presented and read at the ordinary Meeting in February, and they will again be read before the present Meeting.

It will be seen that the receipts have been more than usually large, and that the amount of outstanding arrears of subscriptions, as compared with that of the previous year, is less by 50 guineas.

The sum invested in stock, and which has not in any respect been altered since the Report of last year, is 867*l.*, which exceeds by 37*l.*, the amount of 40 compositions paid since the commencement of the Society.

The number of Members at present on the Society's books is 418, of whom 18 are Foreign Honorary Members, and 7 Foreign Corresponding Members.

The Council has transmitted the Society's diploma to each of the following distinguished individuals, who have been elected Foreign Honorary Members:—Professor Balbi, Colonel af Forsell, Professor Bache, and M. Moreau de Jonnés; and the class of Foreign Corresponding Members has been augmented by the appointment of William Adam, Esq., of Calcutta, and the Rev. H. Longueville Jones, of Paris.

In accordance with a Resolution of the General Committee of the British Association for the advancement of Science, that body was attended, at its last Meeting at Newcastle, by three Fellows of this Society, delegated by the Council for that purpose.

During the past year numerous presents of interesting books and papers have been received from various Members of the Society at home and abroad. Among the presents of books are a valuable set of 25 volumes of "The Farmer's Magazine," from Thomas Tooke, Esq.; 5 folio volumes of the "Population Returns," from Thomas Vardon, Esq.; "A Description of Würtemberg," in 7 volumes, from M. Mohl of Tübingen; and various volumes of official statistical documents relating to France and Belgium, from M. Quetelet, M. M. de Jonnés, Leonard Horner, Esq., &c.

The Council cannot omit to notice the continued activity of the Manchester Statistical Society; and they have also pleasure in adding that, the Statistical Society of Ulster, which at the date of their last Report had only commenced operations, has become distinguished for its energetic proceedings; and promises to accomplish much good in the development and diffusion of truth in the north of Ireland.

In concluding the present Report, the Council would state that, while all the leading nations of Europe and the United States of America are striving to establish the true principles of social science, by prosecuting statistical labours with a continually increasing conviction of the importance of collecting and publishing numerical facts affecting their social interests, they cannot but feel satisfied that a society, established in the metropolis of the British Empire for accomplishing the same great purposes, will always be amply supported by the generous services of many patriotic individuals, willing to devote a portion of their time and talents to its useful proceedings; and therefore they confidently anticipate, as they sincerely hope for, all the satisfactory success to this Society which can be produced by the cordiality, zeal, and intelligence of its Members.

Abstract of Receipts and Expenditure, from the 1st of January to the 31st of December, 1838.

January 1, 1838.		£.	s.	d.	31st December, 1838.		£.	s.	d.
Balance in the hands of the Treasurer and Secretaries		23	15	11½	Cash paid for Rent (four quarters)		105	0	0
Cash received for Arrears of Subscriptions for 1835		2	2	0	" Salaries, Assistant Secretary, and Messenger, each four quarters; and a temporary Clerk, six months, ending in August		205	2	10
" " " "		14	14	0	Per-Centage to Collector on Subscriptions for 1837		6	8	0
" " " "		88	4	0	Expenses of Housekeeper and ordinary Meetings, including Payments and Gratuities to Housekeeper, Hall Porter, Servants, and Postmen		62	15	6
" for Subscriptions for 1835		617	6	0	Printing Annual Report for 1837, Report of Education Committee, Proceedings previous to the Publication of the Journal, and Forms for Committees		130	7	3
" for Compositions 1838		98	14	9	Grants to the Committee on Education in the Metropolis Stationery, including Paper for Lithographing & Folding Books, Papers, and Maps		75	0	0
" for Interest on Stock 1838		29	16	0	Postages, Parcels, and Portage		24	13	7
					Messrs. Knight and Co. for the "Journal," two quarters, ending 1st October		11	15	9
					Miscellaneous Expenses, including a Subscription returned Balance in the hands of the Treasurer		12	7	0½
					" " Secretaries		150	0	0
							10	16	9
							90	5	3
							£884	11	11½

ASSETS, December 31, 1838:—

Stock in Red. 3½ per cent., £560, 17s., cost £567	0	0
" Cons. 3½ per cent., £328, 15s. 4d., cost 300	0	0
Cash Balance	957	5 3
	£884	11 11½

ARREARS OF SUBSCRIPTION DUE TO THE SOCIETY:—

1 for 1834	£2	2	0
5 " 1835	10	10	0
13 " 1836	27	6	0
29 " 1837	60	18	0
46 " 1838	96	12	0

DUE FROM THE SOCIETY, December 31, 1838:—

To Collector for Per-Centage on Subscriptions for 1838	25	17	4
Messrs. Blackwood, for Statistical Account of Scotland	1	4	0
	£27	1	4

Signed { EDWARD ROMILLY,
JOHN C. W. LEVER,
Auditors.
(GEORGE WEIGHT,

7th February, 1839.

An Account of the Recent Progress and Present Extent of Manufactures in Prussia, and of the Trade of the Prussian Commercial Union in Manufactured Goods. From German Official Documents.

THE progress of any nation in those branches of industry which have added so much to the power and wealth of this country, and which afford employment to so large a portion of its population, must at all times be a subject of interest; but the importance which has lately been attached to the extension of manufactures in foreign countries by the advocates of a change in the corn laws, will probably confer additional value upon the following information respecting the present condition of those interests in the Prussian States. It is chiefly the competition of Germany and Switzerland that our manufacturers profess to fear; and it is in those countries that the greatest impulse has recently been given to native industry. Of Switzerland it is not our present intention to treat; but we cannot forbear the expression of our admiration at the successful enterprise of a country which, with its limited means and local disadvantages, situated at so great a distance from any sea or débouché for its products, is nevertheless able to compete in distant lands, as well with the substantial fabrics of Great Britain as with the finest wares of France. Germany, on the other hand, particularly those parts in which manufactures are chiefly carried on, is more favourably situated. Eastern Prussia possesses numerous ports on an accessible and much-frequented sea; Saxony has an easy outlet by means of the Elbe; and the Rhenish provinces of Prussia are equally favoured by their proximity to the Rhine. These countries likewise have recently received a great stimulus, both to production and consumption, by the establishment of the Commercial Union, which, by removing all impediments to free intercourse between a number of separate states, formerly hedged in with vexatious customs' duties and regulations, by erecting a community of interests, and creating among the population both the desire and the power to acquire a larger share of the necessaries and comforts of life, has tended very much to encourage native production, and to develop the national resources. It is not surprising that countries, which have witnessed the advantages that Great Britain has derived from her manufactures, should wish to transfer them to their own shores, or at least to share in the benefits resulting from them; and even the very progress of population will have a powerful influence upon the establishment of manufactures. Prussia has a still greater incentive to render herself independent of England with respect to this branch of trade: our commercial policy has hitherto been to shut out by prohibitory duties those productions which she can offer in exchange for our manufactures. Under a system of free interchange, our commercial relations with Prussia might have been very extensive: her fields produce many articles of primary importance to us,—corn, timber, flax, hemp, &c. &c.; while we have the means of supplying her with the produce of our colonies and of our looms. A few years ago there were scarcely any two countries more favourably situated for commercial intercourse; but we declined receiving her produce, and there was no other country in want of it: she had, therefore, no foreign

market for the surplus of her agriculture, and her means of internal consumption were proportionably crippled. Still an increasing population must be clothed, but they had no means of paying the foreigner for his stuffs: they must find a means of livelihood, but agriculture no longer adequately afforded it; hence the peasants had recourse to manufactures: materials were at hand; some progress had already been made; flax and sheep's wool of superior quality supplied to all the means of an easy domestic occupation, by which they could furnish themselves with the clothing necessary for their own families, and with an additional quantity of cloth to exchange for the necessaries of life with those engaged in other employments. This system of domestic manufacture increased rapidly, and prevails to a great extent even at the present time, though chiefly in the weaving of the two materials already mentioned; for it has not been applied to that of silk, and only very partially to that of cotton. The supply of manufactured goods from this source would not, it is obvious, much exceed, even if it equalled, the demand: there was, therefore, no export; but of late years the introduction of machinery, and the erection of large establishments upon the same extensive system adopted in this country, have carried the production far beyond the existing demand for home consumption, and Prussia and Saxony at present export annually a large quantity of manufactured stuffs. The governments of those countries have encouraged this branch of industry; and the experience of their recent Union under the same system of customs affords a prospect of great advantage arising therefrom to both. It is of less consequence to British interests to trace the early progress of manufactures in these countries than to shew their advance during a recent period; we shall therefore contrast their condition in 1831 and 1837, and as our information for the latter year extends only to woven goods, we shall confine ourselves for the present to that class of manufactures.

Weaving, and the preparation of yarn for the use of the loom, are the most important branches of manufacturing industry in Prussia. In general, spinning by hand is so light an employment that it may be pursued with very little expenditure of bodily or mental strength by persons of almost any age; and it has this additional advantage, that it may at any moment be interrupted without injury, and resumed at pleasure. It is, therefore, well adapted for an occasional occupation during the intervals of other labours and household affairs. By the careful employment of these periods of leisure, large quantities of yarn may be spun in almost every dwelling of the labouring classes, particularly of those engaged in agriculture; and the outlay for the purchase of the simple implement required and of the raw material is so small, that the labourer is content with a very small profit upon the yarn produced. Weaving requires a more expensive implement, as well as greater skill, practice, and bodily strength, than spinning; but the amount of these required for the manufacture of plain cloths is so small, that weaving also may be carried on to a considerable extent, as an occasional employment. Agricultural families frequently weave in the spring the yarn which they have spun during the winter. The facilities which attend these two branches of labor have led to their extensive adoption throughout the whole of Prussia. Large quantities of

linen and woollen yarn are annually produced by hand ; and, in 1837. there were no less than 246,294 looms occasionally employed in the manufacture of linen.

It will be useful, before proceeding further, to compare the qualities of English and Prussian yarns, and to state the relative value of those spun by machine and those spun by hand. In England, a hank of cotton yarn is of a uniform length, and consists of seven skeins, containing each 80 threads, of one yard and a half in length ; it is therefore 840 yards, or 2,520 feet long.* Its quality or degree of fineness is estimated by the number of hanks which weigh a lb. M'Culloch states that the coarsest cotton twist made by machinery in England is No. 6, which is only adapted to candle-wicks ; and the finest hitherto spun is No. 356. As the English foot contains 135·13 Prussian lines (or 139·13 Paris lines), the length of the thread contained in an English hank is $2,417\frac{1}{2}$ Prussian feet. The reel (Haspel) has a very different length in the several provinces of Prussia. In Silesia, with regard to linen yarn, the length of a thread may be taken at $3\frac{1}{2}$ Prussian ells, or $59\frac{1}{4}$ Prussian inches. According to the ordinance for regulating the Linen trade in this province, a skein (Gebinde) consists of 20 threads, a reel (Haspel) of 20 skeins, a hank (Strähn) of 3 reels, and a piece (Stück) of 4 hanks. The length of one such piece, therefore, is about 35,700 Prussian, or 36,757 English feet. But, throughout a great portion of the Prussian States, a piece is reckoned to consist of 20 skeins, of 40 threads each, and contains therefore only a sixth of the above length, viz., 5,950 Prussian, or 6,126 English feet, if the length of a thread be taken at $3\frac{1}{2}$ Prussian ells. This, however, is the case only in Prussia Proper : in Brandenburg and Pomerania it is 4 ells long ; therefore the length of a piece of linen yarn in those two provinces is 6,800 Prussian, or 7,001 English feet ; or 21 such pieces are equal to 4 of Silesia. Since, however, the greatest part of the trade in linen-yarn, at least in the eastern and central provinces of Prussia, is carried on with Silesia, the following calculation will be based upon the Silesian measure of yarn, and the hank of 8,925 Prussian, or 9,189 English feet. The length, therefore, of an English hank of linen yarn, bears to the Silesian hank the proportion of $2,447\frac{1}{2}$ to 8,925, or of about 3 to 11. According to Eytelwein's comparison of weights and measures, the English lb. avoirdupois, is equal to 9,062 Dutch grains (Ass), of which 9,728 equal one Prussian lb. ; therefore the proportion which the Prussian bears to the English lb. is as 4,864 to 4,531, or nearly 44 to 41. Consequently, if 41 English hanks weigh an English lb., 44 will weigh a Prussian lb.. But as 11 English hanks contain a thread of the same length as that contained in 3 Silesian hanks, therefore 44 English hanks are equal in length to 12 Silesian hanks ; and, *similibus paribus*, if 41 English hanks weigh an English lb., 12 Silesian hanks will weigh a Prussian lb..

It is very probable that a linen thread has a smaller diameter than one of cotton, although the same length of each will weigh alike ; but it would be impossible to judge of the fineness of the yarn by its diameter,

* The weights and measures quoted in this paper are according to the English standard, unless expressly stated to be otherwise.

because it is exceedingly difficult to measure that accurately. Hence the fineness of cotton and flax yarn can only be compared by weight; and it must be assumed that a linen thread is as fine as one of cotton, if an equal length of each is of the same weight. Accordingly, linen yarn, of which 12 Silesian hanks weigh a Prussian lb., must be considered to be as fine as cotton yarn of 41 English hanks to the lb.; and cotton yarn, of which 356 English hanks weigh an English lb., would be as fine as linen yarn of which 104 Silesian hanks weigh a Prussian lb.; therefore, the hank weighs only $\frac{1}{16}$, or $1\frac{3}{8}$ dram (Quentchen). The cotton twist, however, most in use, is very much under this degree of fineness, which is the highest hitherto made. The numbers which are principally used in Prussia are between 38 and 42: according to the preceding calculation, No. 41 would be a yarn of which 12 Silesian hanks weigh a Prussian lb., or one hank $2\frac{2}{3}$ loth. The highest number quoted in the *Berlin Price Current* during the year 1838 was 200, which is a yarn of which $58\frac{1}{2}$ Silesian hanks would weigh a Prussian lb., or one hank weigh $2\frac{3}{16}$ drams.

Flax is by far the cheapest of the materials used in weaving; but the yarn made from it is dearer than that of cotton, because it is still chiefly made by hand. The *Berlin Price Current* of the 28th September, 1838, quotes the prices of cotton wool at 17 to 27 dollars a centner (5*d.* to 8*d.* per lb. avoirdupois), according to its quality; the average may therefore be taken at 22 dollars per centner, or $6\frac{1}{2}$ *d.* per lb. The prices of flax are so very different in the several parts of Prussia, not merely on account of the difference of locality or of cultivation, but of the different state (as regards cleansing) in which it is brought to market, that the highest price is more than double the lowest. In August, 1838, the average price of a centner of Memel flax is quoted at $8\frac{2}{3}$ dollars ($2\frac{1}{2}$ *d.* per lb.), while that of Hirschberg reached $18\frac{1}{3}$ dollars ($5\frac{1}{2}$ *d.* per lb.); the two articles being certainly in a very different condition. In general, it may be assumed, that the price of flax in Prussia is, on an average, about half of that of cotton. In the same Price Current, a lb. of the English machine-spun yarn, most commonly used for weaving, viz., mule-twist prima, Nos. 38 to 42, is quoted at 13 to 14 silver groschen; the average of which is exactly equal to 1*s.* 5*d.* per lb. English. The *Silesian Gazette* of August, 1838, quotes the price of a shock of 60 pieces of linen yarn, at Frankenstein, at 26 dollars, or 3*l.* 16*s.* 11*d.*; and this is the kind most used in the mountainous districts. According to the calculation already given, an English hank of cotton yarn contains a thread of $2,447\frac{1}{2}$ Prussian feet in length. An English lb. contains 40 such hanks of No. 40, or a thread of 97,000 Prussian feet long; and, consequently, a Prussian lb. contains a thread of 105,000 Prussian feet in round numbers. On the other hand, a Silesian piece of yarn contains a thread of 35,700 Prussian feet; and a shock, of 60 such pieces, a thread of 2,142,000 feet. The proportion, therefore, of the cotton to the linen yarn, is as 105 to 2,142, which is exactly 5 to 102. The average price of a Prussian lb. of the former is $13\frac{1}{2}$ silver groschen, and therefore the latter would cost $275\frac{2}{3}$ silver groschen, or nearly $9\frac{1}{6}$ dollars, if it were sold at the same rate: but it actually cost 26 dollars, or nearly three times as

much. It cannot, indeed, be asserted that No. 40 mule-twist and the yarn which is brought to market in the largest quantities at Frankenstein are of the same degree of fineness; but it is sufficient for our present purpose that both are used for equally common kinds of cloth.

It results from this calculation, that the ordinary kinds of linen cloths are generally three times as dear as those of cotton, supposing that the cost of weaving and finishing is the same in both cases. But this comparison refers only to cloths made of yarn which is spun by extra labor or occasional employment, and is therefore exceedingly cheap; the contrast is much more favorable to cotton in the manufacture of fine cloths, for which the linen yarn must be spun by men possessing great skill, and following solely this occupation; for experience proves that linen batist is at least six times dearer than cotton goods of the same fineness of thread. Flax cannot, as yet, be spun by machine finer than No. 41 of the English machine-spun yarn. The great flax-spinning factories of Waldenburg and Freiburg, in Silesia, generally produce a yarn of which the Silesian reel weighs $3\frac{1}{2}$ loth (49 grs.); the finest which they have hitherto spun weighs $2\frac{3}{4}$ loth (38 grs.); therefore, 12 reels of the latter weighs 33 loth, or rather more than a Prussian lb. According to the foregoing statements, the same length of thread is of equal weight, if 41 English hanks weigh an English lb., and 12 Silesian reels weigh a Prussian lb. Of the common yarn at $3\frac{1}{2}$ loth to a reel, 12 reels weigh 42 loth or $\frac{2}{10}$ of a Prussian lb. According to the same calculations, 41 English hanks of yarn of the same length to the same weight weigh $\frac{2}{10}$ of an English lb.; therefore $31\frac{5}{8}$ English hanks weigh an English lb.: that is, the yarn in question would be about No. 31 or 32. It appears, from a competent authority, that a lb. of the finest linen yarn which can be spun by hand, namely, lace thread, contains 234,000 ells. Upon the supposition that the Prussian weight and measure are here meant, this yarn would be of the same quality as No. 190 of English mule-twist; for a Prussian lb. of it contains a thread of 497,250 feet; which is equal in length to $55\frac{5}{8}$ Silesian reels. But if 12 Silesian reels weigh a Prussian lb., and 41 English hanks weigh a lb. avoirdupois, $55\frac{5}{8}$ Silesian reels are equal to $190\frac{5}{8}$ English hanks. Therefore flax cannot be spun by hand nearly so fine as cotton can by machine. According to the *Berlin Price Current*, above quoted, the price of cotton-twist-mule prima, No. 200, was $23\frac{1}{2}$ silver groschen (2s. $5\frac{3}{4}$ d. per lb.), whilst the price of a lb. of the above lace thread would be scarcely less than 100 dollars, or 15l. 17s. per lb. This will afford some notion of the enormous difference in the cost of spinning the higher numbers of yarns, of the high price which the hand-spinner is obliged to demand, and of the low price at which yarn of the same degree of fineness can be produced by machinery. The difficulties, however, which obstruct the spinning of flax by machinery render it at present impossible to make the yarn much cheaper than it can be produced by hand. Hitherto, therefore, the effect of the application of machinery to flax-spinning has been to supply a sufficiency of yarn to meet the existing demand, without a rise of prices; whilst only so much hand-spun yarn can be sold at the present prices as can be produced by extra employment, or in other words, at a profit below the market price of labor. Whenever the progress of

mechanics and chemistry shall render it possible to spin flax of equal fineness and at the same cost as cotton, without any great injury to its tenacity (in which consists the excellence of linen yarn), a great revolution must take place in the agricultural, manufacturing, and commercial relations of Prussia. At present linen maintains its competition with cotton, principally on account of its durability and smoothness, notwithstanding the difference of price; and from the throne to the hut the under-garment, at least, is still made of linen.

The price of wool varies still more than those of flax and cotton, according to its quality; some costs 30, and some 120 dollars per centner, or from 9*d.* to 3*s.* per lb. At a moderate computation, therefore, the average price of the middling sorts of wool may be estimated at three times that of the middling sorts of cotton. But the natural qualities of sheep's wool are such that it can be spun by machinery with as much advantage as cotton. Its peculiar properties are, lightness, the power of giving a nap to the cloth, and of receiving a permanent dye; and hence, notwithstanding the difference in the price of the raw material, woollen goods continue to be used for all purposes requiring thickness and durability.

The yarn made from sheep's wool is divided into two kinds, woollen and worsted. The first is employed in all manufactures that are fulled in order to cover the surface with a uniform nap which will hide the thread. This yarn is not generally brought to market, but each cloth-manufacturer prepares as much as he wants for his own consumption. This is the case where the business is carried on upon a small scale, and with little capital, partly by hand, but principally by spinning-machines of various power, according to the several wants of the parties. The yarn used in the commonest stuffs measures 23,800 Prussian feet to a Prussian lb. (or 26,300 English feet to a lb. avoirdupois); but in many cases it is only of half this fineness; and hence the thread which weighs a Prussian lb. is only 11,900 Prussian feet (or 13,150 feet to a lb. avoirdupois). Woollen yarn is seldom spun finer than 47,600 Prussian feet to a lb. (or 52,600 feet to a lb. avoirdupois); some, however, is produced in the western provinces of Prussia, which measures 50,900 feet to a lb. (or 56,240 feet to a lb. avoirdupois). This is not quite twenty-one times the length of an English hank of cotton mule-twist. Therefore the highest number of woollen yarn is equal in fineness to English mule-twist of about No. 20; but, for ordinary cloths, yarn of one-half this fineness is sufficient; and for coarse cloths, yarn one-quarter as fine: so that in spinning wool the advantage is lost which cotton possessed, namely, that the machine can produce much finer yarn than the hand at a comparatively less increase of cost. In fact, a greater degree of fineness would not be desirable for cloths which are intended for fulling. The cost of spinning a Prussian lb. of woollen yarn varies, according to the fineness of the yarn, from 3 to 16 silver groschen, or 3 $\frac{3}{4}$ *d.* to 1*s.* 8 $\frac{1}{4}$ *d.* per lb. avoirdupois; the price of the material may be taken at from 15 to 45 silver groschen, or from 1*s.* 7*d.* to 4*s.* 9*d.* per lb.: therefore the cost of producing a lb. of woollen yarn will vary, according to its quality, from 18 to 61 silver groschen, or from 1*s.* 10 $\frac{3}{4}$ *d.* to 6*s.* 5 $\frac{1}{4}$ *d.* per lb. Hence woollen yarn, on account chiefly of the higher price of its

material, is always considerably dearer than cotton mule-twist of the same degree of fineness. It is otherwise with worsted yarn, by which is meant the yarn made from longer wool and twisted stronger, and used for cloths in which the thread is left visible. In Pomerania worsted yarn is still spun by hand; the kind commonly used measures about 48,000 Prussian feet to a lb. (or 53,042 feet to a lb. avoirdupois); it is therefore of about the same degree of fineness as No. 18 of English cotton mule-twist, but is about double the price, or from 25 to 30 silver groschen the Prussian lb. (or 2s. 7 $\frac{3}{4}$ d. to 3s. 2d. per lb. avoirdupois). Some, however, is also spun by hand, which is twice as fine. But the greatest part of the worsted yarn for home consumption is produced by machinery; not indeed in Prussia, where the manufacture is still very limited, but in England, whence Prussia principally obtains her supply of this article. The English spinners have already attained to No. 100, which is a thread measuring 244,750 Prussian feet, or 270,460 English feet to a lb. The progress of this manufacture has of late caused an increased consumption of light woollen goods, instead of cottons; but the latter still hold their ground against woollens by means of the superior cheapness of the material, and against linens by the cheapness of spinning.

Cotton Spinning.—Weaving is almost entirely confined in Prussia to four materials,—flax, cotton, sheep's wool, and silk; a little hemp is used, but manufactures made of it are included in the following statements with those of flax. Machinery for spinning was first applied to cotton, and afterwards to sheep's wool, and at present yarn of these two materials, spun by hand, can no longer be used with advantage for purposes of weaving. According to the accounts made up to the end of the year 1837 there were in the whole of the Prussian States 152 establishments for spinning cotton, which contained 125,972 spindles. In the kingdom of Saxony, at the same period, there were 107 similar establishments, containing 370,805 spindles, making a total of 496,777, or nearly half a million in the two countries. The number of spindles employed in the cotton manufacture of the United Kingdom was estimated, in 1833, at 9,333,000; and, in the United States of America, the actual number, in 1831, was 1,246,503. So that the power of manufacturing twist in Prussia and Saxony, in 1837, was less than 1-19th, or 5 $\frac{1}{2}$ per cent., of what it was in the United Kingdom in 1833, and 2-5ths of what it was in the United States in 1831. But Prussia, and the States within the Prussian Commercial Union, import annually a large quantity of cotton twist, chiefly from Great Britain. The following statements will shew the trade of the Union in cotton wool, and cotton twist, in the years 1835 and 1836. It would not afford the means of comparison to shew the course of trade in the years preceding 1835, as the Union was composed of different states in each year, and a contrast would lead to fallacy. The quantities of raw cotton imported into, and exported from, the Union, were, in—

	Imports. lbs.	Exports. lbs.	Excess of Imports. lbs.
1835	14,285,437	3,665,532	10,619,905
1836	22,176,407	4,190,023	17,986,384

There is no duty upon the importation of raw cotton, but a duty of

15 silver groschen per centner, or 1s. 4 $\frac{3}{4}$ d. per cwt. on exportation. The quantities imported into each State in 1835 were as follows:—

	lbs.
Prussia, viz.—Prussia Proper . .	15,634
West Prussia	69,681
Posen . . . . .	..
Brandenburg	4,797,537
Pomerania	440,099
Silesia	5,698
Saxony	2,504,714
Westphalia	296,530
Rhenish Provinces . .	4,973,096
Total	13,102,991
Kingdom of Bavaria	503,107
„ Saxony	324,629
„ Württemberg	210,620
Electorate of Hesse	49,074
Grand Duchy of Hesse	94,972
Thüringia . . . . .	..
Total	14,285,397

From the first statement it will be perceived, that the excess of importation of raw cotton over the exportation had increased 70 per cent. in the year 1836, compared with the preceding year; and from the second, that $\frac{11}{12}$ ths of the imports were brought into Prussia. Of this almost the whole was imported into Brandenburg, Saxony, and the Rhenish provinces. Cotton twist pays on importation a duty of two dollars a centner, which is equal to '6 of a penny, or rather more than a halfpenny per lb. There is no duty on its exportation. The trade of the Union in this article was as follows in 1835 and 1836:—

	Imports. lbs.	Exports. lbs.	Excess of Imports. lbs.
White single twist { 1835	28,906,000	3,413,000	25,493,000
{ 1836	36,343,000	3,298,000	33,045,000
	Imports. lbs.	Exports. lbs.	Excess of Exports. lbs.
Double twist . . { 1835	764,000	1,352,000	588,000
{ 1836	1,085,000	1,399,000	314,000

The excess of import, therefore, of single twist had increased 30 per cent., and the excess of export of double twist had decreased 46 per cent. in the latter year.

The following were the quantities imported into each State during the year 1835:—

	Total of Yarn. lbs.	Of which was Double Twist, Thread, and Dyed Yarn. lbs.
Prussia, viz.—Prussia Proper . .	9,502	9,447
West Prussia	36,539	16,238
Posen . . . . .	..	..
Brandenburg	5,504,341	104,942
Pomerania	9,935	5,113
Silesia	2,223,820	51,535
Saxony	3,103,508	18,784
Westphalia	78,469	9,877
Rhenish Provinces . .	9,136,511	209,678
Total of Prussia . .	20,102,628	425,616

	Total of Yarn. lbs.	Of which was Double Twist, Thread, and Dyed Yarn. lbs.
Brought forward	20,102,628	425,616
Kingdom of Bavaria	1,791,119	84,113
„ Saxony	5,645,393	53,571
„ Württemberg	506,921	43,260
Electorate of Hesse	195,896	26,764
Grand Duchy of Hesse	537,281	116,134
Thüringia	891,084	14,647
Total	29,670,327	764,108

These statements shew that 94 per cent. of the raw cotton, and 86 per cent. of the cotton twist, imported into the Union, was brought into consumption in Prussia and Saxony; and, therefore, the extent of the cotton manufacture in the other States is very limited. Bavaria ranks the next, but its importation amounts to little more than 1-20th of that of the above two countries.

Although the principal portion of the cotton twist used in Prussia is imported from Great Britain, yet there are several large spinning establishments in the Rhenish provinces. There are—

	Establishments.	Containing Spindles.	Averaging each.
In the District of Düsseldorf	29	65,677	2,264
„ „ Cologne	9	18,670	2,074
„ „ Coblenz	2	14,000	7,000

Wool Spinning.—Woollen yarn is partly spun in large establishments, but principally by small machines of 40 spindles: still the spinning of wool by hand has by no means ceased in Prussia, although it has become so unprofitable that it must of necessity be relinquished as the manufacture by machinery increases. The force of custom is so great, that manufacturing processes continue to creep on long after they have been superseded by new improvements. Prussia is chiefly supplied with wool from her own flocks; some foreign wool is annually imported, but a much larger quantity of native growth is exported. The number of sheep in the whole kingdom in the year 1834 was 12,632,277. The number in 1831 was 11,751,603; the increase, therefore, in the three years, was $7\frac{1}{2}$ per cent. But this increase was proportionably much greater in the superior breeds of sheep, as will appear from the following statement:—

	Merinos and Whole-bred Sheep.	Half-bred Sheep.	Common Sheep.
In 1831	2,397,171	5,301,385	4,053,047
1834	2,831,553	5,839,332	3,961,392
Increase	434,382	537,947	..
Decrease . . . . .	..	..	91,655

Thus the best sheep had increased nearly a fifth, and the middling sheep a tenth, while the number of common sheep had fallen off more than 2 per cent. As it is reckoned that the best sheep yield annually 3 Prussian lbs. of wool, the middling $2\frac{1}{2}$ lbs., and the common 2 lbs., it is obvious that the production of wool had greatly increased

during the above period. The number of sheep, distinguishing Merinos and whole-bred in each province, was as follows in 1834 :—

	Total Number of Sheep.	Of which were Merinos and Whole-bred.
Prussia Proper . . .	1,613,293	549,247
Posen	1,723,462	244,622
Brandenburg . . .	2,193,901	523,546
Pomerania	1,826,882	498,295
Silesia	2,400,215	609,514
Saxony	1,905,338	373,111
Westphalia	438,189	17,941
Rhenish Provinces .	530,997	15,277
	<hr/> 12,632,277	<hr/> 2,831,553

The number of sheep is greater in Silesia and Brandenburg than in any of the other provinces; but the proportion of Merinos and of the best breed is greatest in Prussia Proper and Pomerania. Of the total number of sheep in the whole of Prussia $22\frac{1}{2}$ per cent. were of the Merinos and superior breeds. McCulloch estimates the number of sheep in Great Britain and Ireland at 32,000,000, or two and a half times as many as in Prussia.

M. Ferber, who wrote upon the commerce of Prussia in 1832, estimates the average produce of wool at one stone of 22 lbs. Prussian, or $23\frac{3}{5}$ lbs. English to 10 sheep. Upon this calculation the total production in 1831 amounted to 27,745,248 lbs. English; and, in 1834, to 29,824,497 lbs., shewing an increase of 2,079,249 lbs., or $7\frac{1}{2}$ per cent. In order to exhibit the actual consumption of the country, there must be deducted from the above quantities the difference between the quantities of foreign wool exported and those imported during the same years, which were as follows :—

	Imports. lbs.	Exports. lbs.	Excess of Exports. lbs.
In 1831	3,936,808	8,316,772	4,379,964
1834	6,592,140	12,246,777	5,654,637

There remained, therefore, for home consumption in 1831, 23,365,284 lbs.; and, in 1834, 24,169,860 lbs.

The wool which is imported is of a coarse kind, and is chiefly brought from Poland into the provinces of Posen and Silesia. The exportation, on the other hand, consists principally of fine wool, which is shipped at Hamburg to England.

The following were the quantities of wool imported into, and exported from, the states of the Prussian Union in each year from 1834 to 1836. There is no duty on importation, but on exportation it amounts to 2 dollars per centner, or 5s. 7d. per cwt.

	Imports. lbs.	Exports. lbs.
In 1834	10,357,692	15,199,690
1835	13,243,192	17,757,788
1836	13,314,370	21,032,870

The trade of each State, in 1835, is shewn in the following a count :—

	Imports. lbs.	Exports. lbs.
Prussia, viz.—Prussia Proper . . .	272,405	176,352
West Prussia . . .	1,140,292	..
Posen . . .	2,315,796	171,971
Brandenburg . . .	116,451	6,897,475
Pomerania . . .	39,232	1,333,526
Silesia . . .	3,717,025	13,415
Saxony . . .	1,285,367	3,904,950
Westphalia . . .	504,968	182,644
Rhenish Provinces . . .	579,367	955,603
Total . . .	9,970,906	13,635,939
Kingdom of Bavaria . . .	980,224	174,459
„ Saxony . . .	1,688,336	2,452,113
„ Württemberg . . .	203,548	504,096
Electorate of Hesse . . .	44,319	27,533
Grand Duchy of Hesse . . .	355,855	810,714
Thüringia . . .	..	152,933
Total . . .	13,243,192	17,757,788

The principal importation is into the provinces of Silesia and Posen, while the chief exportation is from Brandenburg, Saxony, and Pomerania. It is in the provinces of Brandenburg and the Rhine that the manufacture of woollen yarn and cloths is most extensively carried on.

The two following statements shew the quantities and prices of wool sold at Berlin and Breslau in each year from 1832 to 1837.—(See Tables, p. 146.)

The number of machines for spinning woollen yarn in Prussia at the close of the year 1837 was 4,143, containing 401,210 spindles. Of these, 798 machines, and 55,316 spindles, were employed in the preparation of worsted yarn; and 3,345 machines and 345,894 spindles in that of woollen yarn; so that more than 6-7ths of the whole number were employed in the latter branch. The manufacture of woollens can no longer be carried on profitably with hand-spun yarn: yet, to a considerable extent, particularly in the manufacture of stuffs from woollen yarn, spinning and weaving have not been separated; and a number of manufacturers transacting business upon a small scale, and using hand-looms, buy the raw wool, and prepare and spin it for their own looms. The last-mentioned process is generally carried on by machines of 40, or even fewer, spindles; but as the manufacture advances the power of these machines is increased, and there are now some which work 1,000 and even 2,000 spindles. The number of machines and spindles in each province is as follows:—

	Machines.	Spindles.	Average No. of Spindles to each Machine.
Prussia . . .	107	3,550	33
Posen . . .	877	35,965	41
Brandenburg . . .	1,239	128,867	104
Pomerania . . .	359	13,912	39
Silesia . . .	598	52,609	88
Saxony . . .	649	52,398	81
Westphalia . . .	133	6,640	50
Rhenish Provinces . . .	181	107,269	594
Total . . .	4,143	401,210	97

From this it appears, that the manufacture of woollen yarn is carried

on by hand upon a very small scale in the provinces of Prussia, Posen, and Pomerania, the average number of spindles to a machine not exceeding 33 to 41.

Quantities of Wool brought to Market and Sold at Berlin, with the Average Prices thereof in each Year from 1832 to 1837.

YEARS.	Brought to Market.	Per-Centage Proportion Sold.			Per-Centage Proportion Remaining Unsold.	Average Prices per lb.											
		For Home Consumption.	For Exportation.	Total.		Fine.		Middling.		Ordinary.							
						d.	s.	d.	s.	d.	s.	d.	s.				
1832	2,711,108	43.	50.	93.	7.	1 1/2	3	1 1/2	0	1 1/2	1	1 1/2	0	1 1/2	1	1 1/2	0
1833	2,621,863	43.	46.	90.	10.	1 1/2	3	1 1/2	0	1 1/2	1	1 1/2	0	1 1/2	1	1 1/2	0
1834	4,391,650	45.	43.	88.	11.	7 1/2	3	2 1 1/2	0	1 1/2	2	4 1/2	0	1 1/2	1	1 1/2	0
1835	5,332,213	40.	50.	91.	8.	7 1/2	3	1 1/2	0	1 1/2	2	4 1/2	0	1 1/2	1	1 1/2	0
1836	5,708,484	37.	46.	83.	16.	2 71/2	3	0	2	0	2	0	11	1	10	1	10
1837	8,047,267	61.	11.	73.	27.	1 10 1/2	2	10 1/2	1	9	10	10	1	9	10	1	9

A similar Account of Sales and Prices at Breslau in the same Years.

YEARS.	Markets.	Brought to Market.	Average Prices per lb.					
			First Shearing.			Second Shearing.		
			Fine.		Middling.	Fine.		Middling.
			d.	s.	d.	d.	s.	d.
1832	Spring	lbs.	4 1/2	3	1 1/2	10 1/2	2	0
1832	Autumn	4,360,485	2	4 1/2	3	1 1/2	10 1/2	2
1833	Spring	1,018,879	2	3	9	2	0	2
1833	Autumn	4,608,624	2	3	9	2	0	2
1834	Spring	923,384	2	6	4	2	1 1/2	2
1834	Autumn	5,233,928	2	6	4	2	1 1/2	2
1835	Spring	921,843	2	3	2	4 1/2	1 1/2	2
1835	Autumn	6,032,646	2	4 1/2	2	5 1/2	1 1/2	2
1836	Spring	1,168,683	2	1 1/2	3	10 1/2	2	1 1/2
1836	Autumn	5,773,890	2	4 1/2	2	9	1	9
1837	Spring	406,442	2	0	2	1 1/2	3	1 1/2
1837	Autumn	5,936,017	1	10 1/2	3	1 1/2	3	1 1/2

In Westphalia there has been a partial introduction of the system of manufacturing on a large scale, as the average number of spindles rises to 50; but this improvement is almost confined to the district of Arnsberg, in which there is one wool-spinning machine with 1,500 spindles. The same system is still further developed in Saxony and Silesia, where the average number of spindles is respectively 81 and 88. The districts in which it is chiefly carried on are—

Erfurt, containing 5 machines with	8,000 spindles.
Merseburg, ,, 1 ,,	1,040 ,,
Breslau, ,, 1 ,,	1,760 ,,
Liegnitz, ,, 6 ,,	10,650 ,,

Only those machines are included which work more than 1,000 spindles. In Brandenburg there are 104 spindles to a machine. The manufacture is partly carried on upon a large scale; while in some parts several rich proprietors of factories have united to establish extensive spinning establishments for their common supply. The district of Frankfurt contains 18 establishments, in which the number of spindles exceeds 1,000; their aggregate number is 49,310. But by far the greatest proportion of spinning is carried on in the Rhenish provinces, and particularly in the district of Aix-la-Chapelle.

Districts.	Machines.	Spindles.	Average Number of Spindles to each Machine.
Aix-la-Chapelle	72	77,704	1,079
Cologne	25	11,866	475
Düsseldorf	51	12,493	245
Coblenz	22	3,780	172
Triar	11	1,426	130
Total of Rhenish Provinces 181		107,269	594

In 1837 the number of factories for spinning wool, in Saxony, was 116, containing 78,014 spindles; of these, 102 factories and 58,394 spindles were employed in the manufacture of woollen yarn, and 14 factories, with 19,620 spindles, employed in that of worsted yarn—the former being in the proportion of three-fourths of the whole number.

Both the importation and exportation of woollen yarn into Prussia and the other States of the Union are inconsiderable. In 1835 the quantity imported into the whole Union was 299,843 lbs., and the quantity exported 298,428 lbs. In 1836 the importation amounted to 448,349 lbs., the exportation to 283,789 lbs., leaving an excess of importation to the amount of 164,560 lbs. Of the exports in 1835, 155,470 lbs., or more than one-half, were from Prussia, and the remainder principally from Bavaria. The imports into Saxony are not distinguished; the exports amounted only to 16,645 lbs.

Flax Spinning.—The number of flax-spinning factories in Prussia, at the close of 1837, was 7, containing 10,444 spindles. It appears that there were 6 similar establishments in Saxony at the same period. The extensive linen manufacture of these two countries is chiefly supplied with yarn spun by hand; and it is this employment which affords occasional occupation to a very large portion of the population, both in the towns and rural districts. A large quantity of yarn, however, is imported from abroad; and the export, which was formerly consider-

able, is annually falling off. The importation into the whole Union amounted in 1836 to 5,308,535 lbs. of raw yarn, and 1,288,738 lbs. of bleached and dyed yarn and thread; the exportation in the same year amounted to 3,141,750 lbs. of raw, and 676,891 lbs. of prepared yarn: the imports, therefore, exceeded the exports by 2,166,785 lbs. of raw, and 611,847 lbs. of prepared yarn. The duty on the importation of raw yarn is 5 silver groschen per centner, or $5\frac{1}{2}d.$ per cwt.; on that of bleached or otherwise prepared yarn 1 dollar per centner, or $2s. 9\frac{1}{2}d.$ per cwt. There is no duty on the exportation of either.

The principal importation of raw yarn is into Westphalia: it amounted to 2,094,775 lbs. in 1832, and to 2,506,529 lbs. in 1835. Saxony imported 900,358 lbs. in 1832; and in 1835 no less than 6,152,938 lbs.; which, however, is more than the imports into the whole Union during the following or any other year. In 1836 it is not distinguished from the other States of the Union. The principal exportation of raw yarn was formerly from Silesia. In 1832 it amounted to 4,002,207 lbs.; but in 1835 had fallen to 647,969 lbs., which decrease was caused by the loss of the trade with Bohemia. Formerly there was an interchange in the linen manufacture between these two countries; the yarn was spun in Silesia, woven in Bohemia, and returned in an unprepared state to the former country, where it was bleached and brought to market. An alteration in the Customs regulations of Bohemia has put a stop to this trade.

Although the linen manufacture is spread over the whole of Prussia, there are three districts in which it is more extensively carried on than in the rest, and in which it has flourished for centuries. These are Ermeland, in East Prussia, where a coarse yarn is spun by the agriculturists, of which, notwithstanding the competition with English machine-spun yarn, a considerable quantity is still sent by sea to England;—Silesia, where the yarn is partly spun by machinery, partly by hand, and whence the linen is exported by Hamburg and Bremen, and lately by Stettin to America, where it competes with the Irish linen;—and lastly, Westphalia and the Rhenish provinces. Frederic the Second used to call Ravensberg his good little spinning-ground (*sein gutes Spinnerlündchen*). Here, and in the district of Minden, the whole of the finest yarns produced in Germany are spun. Notwithstanding that flax is cultivated very extensively throughout Prussia, the quantities imported have generally exceeded those exported. The year 1836 was an exception; but in the five preceding years the imports, on an average, exceeded the exports by one-third. In 1835, the quantities of flax, hemp, and tow imported, was 16,806,604 lbs; the quantities exported, 11,900,715 lbs. In 1836 the imports amounted to 18,199,344 lbs.; the exports to 21,229,892 lbs. There is a duty of 5 silver groschen per centner, or $5\frac{1}{2}d.$ per cwt., on importation, and none upon exportation.

Silk Throwing.—The raw silk which is brought into the market should not be compared with flax, cotton, or wool, but rather with the yarn made from those materials, because it is already a fabrication, consisting of several threads of the silk-worm twisted together in reeling off the cocoons, and there is no occasion for what can strictly be called spinning by hand. The Prussian Customs' accounts do not distinguish the imports of raw silk: it is included, strange to say, among the un-

enumerated articles. Ferber, however, in 1832, estimated the annual importation at from 670,000 to 700,000 lbs. A small quantity is produced in Prussia—chiefly in Brandenburg—and by village schoolmasters. In 1837 the number of persons engaged in its production was 256, of whom 208 were in the above province. The quantity produced by the latter number was 1,640 lbs., therefore the whole produce may be estimated at 2,150 lbs. The quantity of dyed, bleached, and thrown silk imported into the Union, in 1836, was 196,079 lbs., and the quantity exported was 76,259 lbs., leaving a surplus of imports to the extent of 119,820 lbs. Raw silk pays upon importation the unenumerated duty of 15 silver groschen a centner, or 1s. $4\frac{3}{4}$ a cwt.; silk dyed, or otherwise prepared, pays 6 dollars a centner, or 16s. 9d. a cwt. Both are free upon exportation.

Manufacture of Linens.—The weaving of linen yarn gives employment to a much greater number of looms than that of any other material. It is very general throughout the whole of the States forming the Prussian Commercial Union, although in some parts it is more concentrated than in others. In Prussia, as has been already stated, it is more especially carried on in three districts—Ermeland in East Prussia, Silesia, and Westphalia with the Rhenish provinces. The linens of Bielefeld, in Westphalia, are well known. The whole country about Herford and Warendorf, in the same province, and about Elberfeld, Barmen, and Düsseldorf, in the Rhenish provinces, produces excellent linen, which is much sought after in foreign countries. Elberfeld and the surrounding country produces in particular much linen ribbons and tapes. With respect to the other States of the Union, the manufacture is very general in Bavaria, partly in the towns, but chiefly in the rural districts. It consists for the most part of house-linen, which is made in sufficient quantities to supply the home demand. Bavaria exports some linen wares, but chiefly coarse fabrics, raw yarn, and raw unfinished linens. In Würtemberg, also, the manufacture is extensively carried on, and is proportionably greater than in Bavaria. Middling and coarse linens are the goods most usually made, and there is also an exportation of sail-cloth and ticking. Both the spinning and weaving are chiefly carried on in the neighbourhood of the Alps; bleaching is more generally spread over the country. In Münsingen excellent damask is made; and the linens of Ulm have a wide reputation. Considerable quantities of linen are exported from Würtemberg to Bavaria and Switzerland. Ribbons are also manufactured there, and some are exported. Lace is made in Reutlingen and Elningen, which however does not appear as yet to have found any great demand for exportation. In Thuringia the manufacture is chiefly limited to the districts of Gotha and Weimar; but even there, as well as in the rest of the country, it is confined to the supply of the home demand. The sale for export, and even the home trade, is very unimportant. In Saxony, on the other hand, although the cotton trade has drawn away a number of hands from the linen manufacture, still the latter is very general throughout the country. It is here that the finest qualities of linen and much lace are made. The manufacture is carried on to a considerable extent in both the States of Hesse. In the Electorate it is spread over the whole country; but in the Grand Duchy it is more extensively prosecuted in the pro-

vince of Upper Hesse; still, on the whole, more is exported from the Grand Duchy than from the Electorate.

With respect generally to the linen manufacture of the Prussian Union, it is to be observed that the high duties levied upon German linens in France, Italy, North America, and Russia, have of late years very much lessened the export of linen goods. The competition of English machine-spun yarn, and the great extension of the cotton manufacture, have also tended to occasion this result. M. Dieterici considers that the latter cause is likely to have a very serious effect upon the linen trade, and expresses his opinion that the manufacture can only be maintained by keeping up large stocks in expectation of conjunctures in trade; but this will re-introduce a great dependence of the weavers upon the manufacturers and merchants, and the condition of the trade is already such that only very low wages can be paid to the weavers, who are consequently for the most part in a state of great poverty. Nevertheless, the linen manufacture is so spread over a large part of Germany, and descends so regularly from father to son, particularly as an occasional employment to the agricultural classes, that the number of linen weavers continues to increase, as will be seen from the following statement of the number of looms in Prussia at three different recent periods:—

Years.	In Constant Employment.	In Occasional Employment.
1831 . . .	35,668	216,780
1834 . . .	36,879	220,343
1837 . . .	35,877	246,294

Thus, while the number of looms in constant employment has remained almost stationary, or rather has retrograded between the years 1834 and 1837, that of looms occasionally employed has increased steadily to the extent of about one-seventh, or 13·6 per cent. The proportion of the former, and consequently of those persons who depend upon weaving alone for their subsistence, is only one-eighth of the latter, or of those persons who have recourse to it during their leisure hours, or during periods of slack employment in other trades.

The number of looms in each province of the Prussian empire, at the close of 1837, was as follows:—

Provinces.	In Constant Employment.	In Occasional Employment.
Prussia Proper . . .	789	98,849
Posen	1,225	22,245
Brandenburg . . .	5,644	24,877
Pomerania	2,298	35,326
Silesia	12,347	11,620
Saxony	4,237	13,503
Westphalia	5,431	26,900
Rhenish Provinces .	3,906	12,974
Total	35,877	246,294

But as the looms occasionally employed are not at work upon an average more than one month annually, their number must be divided by 12, and added to the number constantly employed, in order to arrive at the real extent of the productive power of this manufacture in Prussia. To this calculation is added, in the next statement, the proportion of looms to the population of each province, by which may be seen the comparative prevalence of the manufacture in each.

Provinces.	Number of Looms at work throughout the whole Year.	Number of Looms to 10,000 Inhabitants.
Prussia Proper	9,026	41
Posen	3,079	26
Brandenburg	7,717	44
Pomerania	5,242	52
Silesia	13,315	49
Saxony	5,362	34
Westphalia	7,673	57
Rhenish Provinces	4,987	20
Total	56,401	40

The value of the manufacture is not to be estimated by the number of looms at work, but by the quality of the goods produced. The more that weaving is carried on as an occasional employment the more will it be confined to the production of such goods as can be prepared with simple implements and small skill. In the province of Prussia Proper, where the manufacture is chiefly carried on by occasional employment, the proportion which, for real efficiency, the looms so employed bears to those constantly at work, is as the 12th part of 98,849, or 8,237 to 789, which is about 21 to 2. On the other hand, in Silesia, where the proportion is exactly opposite, the ratio is as 968 to 12,347, or nearly 1 to 13. It is true, that even in the province of Prussia, besides the plain and coarse linens commonly made, some fine and excellent cloth for towels and napkins is produced; but how inconsiderable this branch of the manufacture is in that province compared with the production of fine linen, batist or lawn, and table-linen, in Silesia, may be easily seen from the above proportion of the two kinds of labor.

By far the greater part of the linen manufacture is carried on in the country. There were at end of the year 1837,—

In hamlets and villages,—

Looms occasionally employed, 232,482, which, divided by 12, for the reason above given, will give as the number employed } throughout the year	19,373
Looms constantly employed	24,290
	<hr/> 43,663

In towns,—

Looms occasionally employed, 13,812, which, according to the same calculation, may be reckoned at } Looms constantly employed	1,151
	11,587
	<hr/> 12,738

Thus almost 5-7ths of the whole linen manufacture is carried on in the country, and even of the looms regularly employed more than 2-3rds are at work in the hamlets and villages. But of the remaining third the principal part are to be found in small towns. The 10 towns in Prussia, which rank highest for the extent of their manufactures (erster Gewerbesteuerklasse), contained only 195 looms constantly employed in this branch, and 100 looms occasionally employed; which, if the last be reckoned as constantly employed, will amount in all to 295 looms, or 1-63rd of the whole number in the towns. Even during the time when the system of taxation had for its object to concentrate manufactures in the towns, weavers of linen had permission to settle in the rural districts.

As the quantity of flax grown in Prussia is not known, the exact extent of the linen manufacture cannot be stated. Dieterici, however, has formed the following estimate of the production in 1831. He assumes that the shirt of a full-grown person contains from four to five Prussian ells of linen, and weighs about a Prussian lb.; and further, that the common day-labourers in Prussia wear out, on an average, two shirts annually. If, on the one hand, children use a less quantity, on the other there are numerous other purposes to which linen is applied, even in the humblest households. The summer clothing of men and boys consists of linen; the women, in the rural districts, wear linen gowns and aprons; table-cloths, bed-furniture, and many other articles of common use are made of the same material. It may, therefore, fairly be estimated, that the average consumption of each individual in Prussia is two Prussian lbs. annually. Upon this supposition the home consumption, in 1831, was 27,986,060 lbs. (English). The excess of exportation of yarn and linen cloths of all kinds, in 1831, after deducting the excess of raw unprepared linen imported, was 11,214,634 lbs.; therefore the exports bore the proportion of 1 to $2\frac{1}{2}$ of the quantities manufactured.

The following table will shew the quantities of linen manufactures imported into, and exported from, the States comprised in the Prussian Commercial Union, in each of the three years ending with 1836. The rates of duty on importation were, and continue to be—

			s.	d.
Upon grey packing-linen and sail-cloth . .	20 s. g. per centner, or 1	10	per cwt.	
„ Raw unfinished linen cloth and ticking	2 doll.	5	7	„
„ Bleached, dyed, or printed linen cloth and ticking, table-linen, and towel- ling, &c.	11 „	30	8	„
„ Ribbons, cambric, batist, tape, ho- sery, &c.	22 „	61	4	„
„ Lace thread	55 „	153	4	„

There is no duty upon exportation.

Description.	Years.	Import.	Export.	Excess of Export.
		lbs.	lbs.	lbs.
Grey packing-linen and sail-cloth	1834	739,575	3,774,963	3,035,388
	1835	726,826	3,629,882	2,903,056
	1836	969,770	6,013,739	5,043,989
Raw unfinished linen cloth and ticking	1834	663,316	1,777,696	1,114,380
	1835	551,980	2,431,450	1,849,470
	1836	2,277,161	3,354,710	1,077,549
Bleached, dyed, or printed linen cloth and ticking, table-linen, and towel- ling, &c.	1834	96,918	12,007,922	11,911,004
	1835	99,633	12,553,425	12,453,792
	1836	151,102	12,949,597	12,798,495
Ribbons, cambric, batist, tape, hosiery, &c.	1834	10,860	749,255	738,395
	1835	15,582	789,864	774,282
	1836	12,277	1,103,992	1,091,715
Lace thread	1834	2,833	6,020	3,187
	1835	2,479	5,666	3,187
	1836	2,243	6,610	4,367

With respect to grey packing-linen and sail-cloth, the importation is confined to the northern States; the southern States of Bavaria, Saxony, Würtemberg, and Thuringia, only imported 70,000 lbs. in 1835. The importation into the Prussian States had fallen off since 1832. The principal exportation is from Westphalia and Brandenburg. In the former province it had risen from 1,090,180 lbs. in 1832 to 1,558,125 lbs. in 1835; and in the latter from 33,289 lbs. in 1832 to 1,361,338 lbs. in 1835. This great increase in Brandenburg consists of manufactures of the kingdom of Saxony sent to Hamburg for shipment, which therefore appear as exports from the above province.

The importation of raw linen cloth and packing was much less in 1834 than it was in 1832, owing principally to the interruption of the linen trade between Silesia and Bohemia, which has been already noticed.* The exportation has nearly doubled since 1832-33; it takes place principally from the southern States, from Würtemberg and Bavaria, which is explained by the circumstance of a large quantity of linen cloth being sent to Switzerland to be bleached.

The importation of bleached, dyed, and printed linens, &c. is inconsiderable; but the exportation is very great. This article forms one of the principal branches of export from Prussia and the other States of the Union. Of the total quantities exported in 1835 about 3-5ths were from Brandenburg, but of this only a small portion was the produce of that province; the principal part consisted of the surplus of Silesia, Saxony, and the States in the interior of the Union, which was sent down the Elbe to find a market at Hamburg, where Silesian and Saxon linens form one of the chief objects of trade with America.

The importation of ribbons, cambrics, &c. is small; nearly one-half of the quantities exported is from the Rhenish provinces. The small quantity of lace-thread which is exported is chiefly from the kingdom of Saxony.

Manufacture of Woollens.—This branch of manufacture is much less extensive in Prussia than that of linen, but it is increasing. The number of looms at work were—

	Constantly Employed.	Occasionally Employed.
In 1831 . .	15,360	2,693
1834 . .	15,075	3,549
1837 . .	16,937	4,085

It will be seen that the ratio of increase in the looms occasionally employed has been much greater and more steady than in those constantly employed; being 51 per cent. during the six years in the first, and only 10 per cent. in the latter class. The number at work in each province were as follows, in 1837:—

	Constantly Employed.	Occasionally Employed.
Prussia Proper . .	557	2,185
Posen	997	129
Brandenburg . .	4,621	148
Pomerania . . .	528	406
Silesia	2,687	435
Saxony	2,506	354
Westphalia . . .	584	53
Rhenish Provinces .	4,457	375
Total . .	16,937	4,085

* See page 148.

Prussia Proper again contains the greatest number of looms in occasional employment, amounting to one-half of the total number so employed; and of these, 2,092 are in the rural districts, and only 93 in towns. The cause of this kind of labor being so general in this province is, that agriculture is still universally prevalent in it, and therefore the great mass of the people are obliged to husband their means, and to manufacture their own clothing. The goods generally made in this manner are a strong woollen fabric, looking like cloth, called "Wand," mostly grey, and made of black and white wool mixed, which is used for upper garments and cloaks; and the dark woollen cloths, made with a mixture of linen yarn dyed of numerous different colours, for women's gowns. Formerly it was contrary to law to dye the cloth called Wand, or to weave it in striped patterns, in order that the manufacturers in the towns might have a monopoly; but this prohibition has become obsolete. As the condition of the population improves this kind of employment will cease, since it can only be continued while there is an inadequate demand for labor in other branches of industry. In the other provinces the number of looms in this class is very small, and are found almost entirely in the rural districts; out of 1,900 only 199 are in towns. The goods which they produce are coarse and light woollen and half-woollen stuffs, such as frieze, flannel, &c., which are woven during the winter by peasants who have other occupations during the fine season of the year. In Berlin many masons' laborers are employed during the winter in the manufacture of serge. Of the looms constantly employed, one-quarter are found in Brandenburg, and another quarter in the Rhenish provinces. Silesia and Saxony each contain more than an eighth, and the rest are distributed over the other provinces. The principal seats of the manufacture in Saxony are Zeitz, Naumburg, Burg, Magdeburg, and Langensalza; in Brandenburg, Luckenwalde, Cottbus, Fürstenwalde, and Finsterwalde; and in the Rhenish provinces, Eupen, Montjoie, and Aix-la-Chapelle, where the finest cloths are made. Prussia and the other States of the Commercial Union export a large quantity of woollen manufactures. The official documents do not afford the means of distinguishing the different kinds of goods, and therefore the extent and value of the trade can only be estimated by the gross weight of the exports. The duty on importation is the same upon all descriptions of woollens, with the exception of carpets, and amounts to 30 dollars per centner, which is equal to 83s. 9d. per cwt., or 9d. per lb. The duty on carpets is exactly one-third less, 20 dollars per centner, or 6d. per lb. There is no duty on exportation. The following is the amount of trade of the whole Union in woollens during each of the three years ending with 1836 :—

		Imports. lbs.	Exports. lbs.	Excess of Exports. lbs.
Woollen cloths, stuffs, and hosiery . . .	1834	1,393,329	6,040,910	4,647,580
	1835	1,620,337	7,112,557	5,492,219
	1836	1,450,465	7,948,814	6,498,349
Carpets of sheep's and other wool . . .	1834	19,596	56,781	37,185
	1835	20,304	67,405	47,101
	1836	25,144	72,600	47,455

From this statement it appears that the excess of exportation of woollen goods, exclusive of carpets, has increased 18 per cent. in each of

the last two years above quoted. M. Dieterici estimates the weight of a piece of woollen cloth at from 20 to 25 lbs. Prussian, which would average 24 lbs. English; therefore the total exportation of Prussian woollens represented in cloth would amount to 331,200 pieces.

The quantities exported from each State of the Union were as follows in 1835 :—

	Woollen Cloths, Stuffs, and Hosiery. lbs.	Carpets of Sheep's and other Wool. lbs.
Prussia Proper	57,843	590
West Prussia	3,069	..
Posen	9,079	236
Brandenburg	818,432	2,006
Pomerania	25,970	472
Silesia	189,114	2,124
Saxony	1,832,117	27,623
Westphalia	635,810	472
Rhenish Provinces	840,507	15,582
Total	4,411,935	49,108
Kingdom of Bavaria	1,089,354	13,339
„ Saxony	193,127	472
„ Württemberg	683,974	1,888
Electorate of Hesse	245,639	1,652
Grand Duchy of Hesse	488,485	944
Thüringia . . . . .	..	..
Total	7,112,557	67,405

Thus of the whole quantity Prussia exported 62 per cent., Bavaria 15 per cent., and Württemberg $9\frac{1}{2}$ per cent. Half the remaining quantity was exported from the Grand Duchy of Hesse. Among the provinces of Prussia, Saxony exported by far the greatest quantity, amounting to 41 per cent. of the total exports from that country, the Rhenish provinces exported 19 per cent., Brandenburg nearly the same, Westphalia $14\frac{1}{2}$ per cent., and Silesia 4 per cent. The trade of the other provinces was very trifling; their importation having ceased when the importation of Prussian cloths into Russia was prohibited.

M. Dieterici gives the following estimate of the consumption of woollens in Prussia in the year 1834. The quantities of raw wool consumed in that country, in 1834, was estimated (*see* p. 144) at 24,169,860 lbs. This divided among a population of 13,509,927 individuals would average 1·793 lb. to each person. It is calculated that a stone of wool, containing $23\frac{1}{2}$ lbs. will, on an average, produce a piece of cloth of $23\frac{1}{3}$ yards in length. And, according to this proportion, 1·793 lb. would give 1·78 yard to each person. But, from this, deduction must be made of the excess of manufactured goods exported beyond the quantities imported, which, proceeding upon the same method of calculation, would amount to 0·20 yard to each person, leaving the actual estimated consumption 1·58 yard. In 1831 it was computed at 1·56 yard. Adopting the same formula, M. Dieterici estimated the consumption of the United Kingdom in 1830 at 4·2 yards to each person, which is nearly three times as great as in Prussia.

On comparing the number of looms with the exports of each province, it appears that there is no correspondence whatever between the extent of manufacture and that of exportation. The official data

do not afford the means of accounting for this fact; but it is well worthy of notice. While Saxony, with 2,506 looms, exported 1,832,117 lbs. of woollens, Brandenburg, with 4,621, or nearly double the number of looms, and being the outlet to the port of Hamburg, exported only 818,432 lbs., or half the quantity exported from Saxony. Similar discrepancies are observable in the other provinces, as will be seen in the following table:—

Provinces.	Looms in Constant Employment.* No.	Exports of Woollen Cloths, Stuffs, and Hosiery. lbs.
Prussia	557	60,912
Posen	997	9,079
Brandenburg	4,621	818,432
Pomerania	528	25,970
Silesia	2,687	189,114
Saxony	2,506	1,832,117
Westphalia	584	635,810
Rhenish Provinces . .	4,457	840,507
Total	16,937	4,411,935

Manufacture of Cottons.—Flax and wool are grown in all parts of the Prussian dominions, but cotton is entirely a foreign production: hence the latter was but little consumed, and was considered rather as an article of taste and luxury until the introduction of the spinning-machine, which reduced the price of cotton yarn much below that of linen yarn of equal fineness, and until the increased cultivation of raw cotton in consequence of the demand for it in Europe caused its price to fall much below that of sheep's wool. When, however, this took place, the cotton manufacture took root rapidly, and soon began to press upon those of linen and wool, especially upon the finer qualities of the former, and upon the coarser stuffs of the latter material, such as serge, tammy, barracan, &c., which were in common use. In those parts of the country in which agriculture is still predominant, and in which the lower classes manufacture the stuff for their own clothing from the materials which they themselves cultivate, the use of cotton manufactures continues for the most part confined to the middle and higher classes; and the preference which is every where shewn to linen and woollen materials for certain parts of the dress is so great, that it is very unlikely that for those purposes they will ever be superseded by cotton. However, the consumption of cotton goods increased to so great an extent that it became advisable, as a matter of state economy, to encourage the application of labor to this manufacture, first for home consumption, and then for exportation; hence the fabrication of cotton has become established on an extensive scale in some parts of the Prussian dominions, while in others it remains very small, and for the most part of no importance.

In general, cotton-weaving is carried on only by persons who make it their sole occupation throughout the year, and depend upon it for their livelihood; still some plain and coarse cotton goods are manufactured, particularly in the rural districts, during the winter, by families who are otherwise employed during the summer. The official documents

* The looms in occasional employment are not noticed, as their number in each province is so small.

If the actual number of looms in each district at the three several periods be compared, the following will be the results:—Prussia Proper, Posen, and Pomerania, have no cotton manufacture at all worthy of notice; nor does it appear that any is likely to spring up in those provinces. In Brandenburg, although there was a trifling increase in 1834, the number of looms was actually less in 1837 than in 1825, exhibiting therefore not only a stationary but a declining trade. In Silesia, on the contrary, the number of looms had doubled in 1834, and trebled in 1837. In Saxony they had more than doubled between 1825 and 1837; in Westphalia they had increased in the same period by two-thirds, while in the Rhenish provinces they had only increased by about one-fourth. This, however, will be shewn more exactly in the following statement of the total per-centage increase during each period:—

Provinces.	Per-centage Increase.		
	In 9 Years, from 1825 to 1834.	In 3 Years, from 1834 to 1837.	In 12 Years, from 1825 to 1837.
Brandenburg . . .	4·6	..	..
Silesia	111·1	44·5	205·1
Saxony	65·6	32·7	119·8
Westphalia	24·8	37·1	71·3
Rhenish Provinces .	16·2	10·8	28·7
Total of Prussia .	43·4	25·3	79·7

In Brandenburg the number had decreased in the three years 5·3 per cent., and in the whole period nearly 1 per cent.

As, however, the above proportions refer to three unequal periods of years, it will be desirable to state the average *annual* rate of increase in each province, which is accordingly done in the following table:—

Provinces.	Average Annual Rate of Increase.		
	From 1825 to 1834.	From 1834 to 1837.	From 1825 to 1837.
Brandenburg . . .	0·5	Decrease.	Decrease.
Silesia	12·3	14·8	17·1
Saxony	7·3	10·9	10·
Westphalia	2·7	12·3	6·
Rhenish Provinces .	1·8	3·6	2·4
Total	4·8	8·4	6·6

From this it appears that the increase was greater in all the provinces during the years from 1834 to 1837 than during the preceding period, and that in Westphalia particularly a great impulse was given to the manufacture in those years. It results further that the increase during the twelve years has been greatest in Silesia, namely, 17 per cent. annually; next in Saxony, where it was 10 per cent.; then in Westphalia, 6 per cent.; and, lastly, in the Rhenish provinces not quite 2½ per cent. In Brandenburg, as has been already observed, the manufacture had decreased.

A comparison of the proportion which each province bore to the whole State, in each year, shews that Brandenburg fell from a fifth in 1825 to an eighth in 1837, and the Rhenish provinces from a third to a fourth; while Saxony and Westphalia remained stationary, and Silesia rose from a quarter to nearly one-half in the same period.

The following are the exact proportions of each province to the whole State in the several years:—

	1825.	1834.	1837.
Brandenburg . . .	22.4	16.4	12.3
Silesia	26.6	39.1	45.1
Saxony	7.9	9.1	9.7
Westphalia	7.6	6.6	7.3
Rhenish Provinces . .	35.3	28.6	25.3
Other Provinces . . .	0.2	0.2	0.3
Total	100.	100.	100.

The manufacture of cotton is chiefly, as in England, confined to certain districts, even in those provinces in which it is the most extensively prosecuted. The principal localities are the mountains of Silesia, certain parts of the district of Düsseldorf, a portion of Thuringia, and the city and neighbourhood of Berlin. This is more particularly shewn in the next statement:—

Localities.	Number of Looms.	
	In Constant Employment.	In Occasional Employment.
Silesia—In the circles (Kreisen) of Lauban, Löwenberg, Hirschberg, Landshut, Waldenburg, Schweidnitz, Reichenbach, Frankenstein, Glatz, Habelschwerd, and Leobschütz	16,988	2,513
Rhenish Provinces—In the district of Düsseldorf, with the exception of the two northern circles of Rees and Cleve, and including the circle of Hagen, in the district of Arnsberg (Westphalia)	9,291	1,041
Saxony—In the district of Erfurt, with the exception of the two circles of Langensalza and Weissensee, and including the circle of Zeitz, in the district of Merseburg	2,763	743
Brandenburg—In the city of Berlin, and the circles of Niederbarnim, Teltow, Jüterbogk-Luckenwalde, Zauch-Belzig, and the city of Potsdam	4,362	248
In addition to the above four chief seats of the manufacture—		
Westphalia contains, in the circle of Siegen, within the district of Arnsberg	724	35
In the north-western part of the district of Münster, in the circles of Ahaus, Borken, and Steinfurt	828	457
In the circle of Waarendorf, within the same district	366	—
In the circle of Hörter, within the district of Minden	401	19
Total	35,723	5,056

Nine-tenths, therefore, of the whole cotton manufacture are carried on in the above districts, containing 2,158 square miles, or about one-eleventh part of the area of the Prussian dominions (23,208 square miles), and the remainder is scattered over the rest of the country.

As the whole of the raw material of this manufacture must pass through the Custom House, excepting perhaps some of the finer kinds of twist which is smuggled into the country, it is possible to estimate its precise extent in a manner which cannot be done with regard to flax and wool. Dieterici computes the quantity of cotton converted into twist which remained for consumption in the Prussian dominions, in 1831, at 17,481,950 lbs., which quantity, allowing 25 per cent. for the loss in manufacturing, would yield 13,111,463 lbs. of cotton goods. In

order to estimate the home consumption, there must be deducted from that amount the excess of goods exported beyond the imports, which was 740,400 lbs.; there remained, therefore, 12,371,063 lbs. to be divided among 13,200,460 inhabitants, which would average 0.93 lb. to each person, or 4.65 lbs. to a family of five persons. From a similar calculation for the average of the years 1834 and 1835, when the present Commercial Union was in operation, the total quantity of cotton reckoned as twist, retained in the whole Union, was 37,411,800 lbs. If from this be deducted a fourth, or 9,352,950 lbs., for waste in the process of manufacture, the amount of goods made will be 28,058,850 lbs.; the excess of exportation was 7,605,528 lbs.; the consumption, therefore, was 20,453,322 lbs., which, being divided among a population of 23,635,065, gives an average of 0.86 lb. to each person, or 4.30 to a family of five persons, which is $7\frac{1}{2}$ per cent. less than the consumption of the Prussian States alone in 1831. At that time Prussia imported a considerable quantity of cotton goods, and her exports only exceeded her imports by one-third, as will be seen in the next table. Upon the accession of the kingdoms of Saxony, Bavaria, and Würtemberg, to the Union in 1834, the export of cottons immediately trebled, while the imports remained stationary. It is evident, therefore, that unless the import of foreign cottons into Prussia immediately fell off, and almost ceased at that time, there had not previously been any such importation into the other States of the Union. On the other hand, as their home consumption was less than that of Prussia, and their export was greater in proportion to their population, it would appear that the development of their manufacture appears to have been caused principally by an export trade.

The following table exhibits the imports and exports of cotton goods in the Prussian dominions alone, upon an average of the three years, 1829 to 1831; of the Prusso-Hessian league, consisting of Prussia and the two States of Hesse, in the years 1832 and 1833; and of the whole Union, in the three following years. The duty on importation was 55 dollars per centner, or 1s. $4\frac{1}{2}$ d. per lb., previous to 1834; it is now 50 dollars per centner, or 1s. 3d. per lb.

	Imports. lbs.	Exports. lbs.	Excess of Exports. lbs.
Average of 1829-31	1,434,292	2,174,694	740,402
„ 1832	1,671,452	3,055,574	1,384,122
„ 1833	1,529,085	2,753,369	1,224,284
„ 1834	1,598,380	8,848,346	7,249,966
„ 1835	1,630,017	9,590,873	7,960,856
„ 1836	1,594,484	9,948,324	8,353,840

Thus throughout the whole period the importations have remained nearly stationary. The exports, however, increased to some extent in 1832 and 1833, which was principally owing to the accession of the Grand Duchy of Hesse to the Union, as the exports from that State amounted to about 354,000 lbs. in each year; but an increased exportation took place at the same time from the Prussian dominions, particularly from the Rhenish provinces. In 1834, however, the exports rose in the proportion of 3 to 1 compared with the average of 1832-33, and of 4 to 1 compared with 1829-31. This was chiefly caused by the accession of the kingdom of Saxony; but some of the other States con-

tributed to swell the amount. A considerable manufacture of cotton goods is carried on in Bavaria, about Augsburg and Hof, and in other parts of the kingdom; in Würtemberg, about Biberach and Tuttlingen, adjoining the manufacturing districts of Switzerland; but to a much greater extent in Saxony, chiefly in Chemnitz, Plauen, and the surrounding districts, where the use of the loom is almost universal, and where the skill, extraordinary industry, and rare contentment of the artisans enable them to produce cotton goods of all kinds, which are so good and so cheap, that they compete successfully with the manufactures of Great Britain, and find an extensive sale in foreign countries.

The export of cottons from each province, and the influence which the accession of the kingdoms of Saxony, Bavaria, &c., had upon the commerce of the Union, will be seen in the following table:—

Provinces.	Exports of Cotton Manufactures in the Years	
	1832.	1835.
	lbs.	lbs.
Prussia—East Prussia	445,162	220,515
West Prussia	157,122	46,629
Posen	97,272	76,967
Brandenburg	153,109	1,234,672
Pomerania	2,242	4,013
Silesia	303,847	336,439
Saxony	354,264	2,976,363
Westphalia	521,893	579,737
Rhenish Provinces	658,008	1,040,954
Total	2,692,928	6,516,292
Kingdom of Bavaria . . . .	..	280,956
„ Saxony . . . .	..	2,198,658
„ Würtemberg . . . .	..	252,742
Electorate of Hesse	1,062	171,406
Grand Duchy of Hesse	361,583	170,816
Thüringia . . . .	..	..
Total	3,055,574	9,590,873

If the quantities exported from the several provinces be compared with the number of looms employed in each, it will be found that in this, as in the woollen manufacture, there is no relation between the amount of fabrication and that of exportation. In 1832 the exports from Prussia Proper exceeded 600,000 lbs., while there were only 12 looms in the province. In 1835, Silesia, with 17,954 looms, exported 336,439 lbs.; while Saxony, with only 3,840 looms, exported 2,976,363 lbs. The great increase of the exports from Brandenburg, Silesia, and the Rhenish provinces in the year 1835, is worthy of notice. That from the former province is in some measure owing to the increase of the manufacture in Silesia, although a rapid progress has taken place within the province itself, particularly at Berlin. The official documents do not furnish any information as to the countries to which the merchandise exported from the Union is shipped, and therefore the particular trade of each portion of it cannot be distinguished.

Silk Manufacture.—The principal seats of the manufacture of Silk in Prussia are the Rhenish Provinces and Brandenburg, particularly the city of Berlin, in which districts it was first established and encouraged by Frederic II. Its increase has been very rapid since 1831,

as will be seen from the following statement of the number of looms employed in the fabrication of silk and half-silk goods in each of the years 1831, 1834, and 1837 :—

	No. of Looms.	Increase per Cent.
1831 . . .	8,956	..
1834 . . .	12,044	34
1837 . . .	14,111	17

Thus the increase between 1831 and 1834 was 34 per cent., and, between the latter year and 1837, 17 per cent.; shewing the existence of a much greater stimulus to the manufacture during the first period. The total increase in six years was 57.5 per cent. Four-fifths of these looms are situated in the district of Düsseldorf, and one-sixth in Brandenburg; so that there remain but few in the other parts of Prussia. The exact number in each district at each of the above periods was as follows:—

Provinces.	Districts.	Looms at Work.		
		1831	1834	1837
Rhenish Provinces	Düsseldorf . .	6,742	9,031	11,137
	Cologne . . .	344	409	315
	Aix-la-Chapelle	31	43	23
Westphalia	Arnsberg . .	101	129	116
Brandenburg	Berlin, City of .	1,254	1,715	1,575
	Potsdam . . .	107	196	
	Frankfurt . .	122	264	740
	Erfurt . . .	141	109	122
Saxony	Magdeburg . .	12	9	5
	Merseburg . .	11	9	2
Silesia	Liegnitz . . .	59	96	76
Pomerania	Stettin . . .	32	34	..
Total . .		8,956	12,044	14,111

In Düsseldorf there are two central points round which this manufacture is chiefly carried on, Elberfeld and Krefeld. The former district contains about three-fifths, and the latter two-fifths, of the whole number of looms, viz. —

	Circles.	
In and about Elberfeld .	Elberfeld . . .	5,982
	Solingen . . .	409
	Lennepe . . .	257
In and about Krefeld .	Krefeld . . .	2,428
	Kempfen . . .	1,099
	Gladbach . . .	754
In other Parts . . .	Geldern . . .	92
	Düsseldorf . .	89
	Other Circles .	27

The official documents afford the means of comparing the increase in Krefeld since the year 1834; there were then, in and about that locality, 3,620 looms in 28 factories, of which number about 1,600 were common and jacquard looms employed in the manufacture of silk and half-silk piece goods and handkerchiefs, 1,280 in that of velvet, and 740 in that of plush; besides 630 looms for weaving velvet ribbons, and 280 for weaving common ribbons, of which branch of the manufacture a full account will presently be given.

In the district of Cologne, according to the returns of 1837, silk-weaving was entirely confined to the town and circle of Cologne, in which there were 155 looms, and the adjoining circle of Mühlheim, which contained 159 looms; there was only one other loom in the remaining part of the district.

The chief seat of the manufacture in Brandenburg is—

The chief seat of the manufacture in Brandenburg is—		Looms.
The City of Berlin, containing		1,575
To which should be added the adjoining districts—		
Of the Circle of Niederbarnim, in and about Bernau, containing		31
Of the Circle of Teltow, in and about Köpenick		93
Of the Town of Potsdam		75
Of the District of Brandenburg		190
And of the District of Jüterbogk-Luckenwalde		1
Making a Total of		1,965

Or six-sevenths of the whole number at work in Brandenburg. Of the remainder, 50 are in the town of Züllichau, and 300 in the low lands of the adjoining circle of Sternberg.

Of the 76 looms in Silesia, 70 are in the town of Schmiedeberg, and 6 in Greiffenberg; and of the 129 in Saxony, 122 are in the town of Langensalza, within the district of Erfurt, 2 are in Zeitz, and 5 in Magdeburg.

In the other States of the Prussian Union the silk manufacture is inconsiderable; there are some looms in Bavaria, Würtemberg, Saxony, and Hesse, but the exportation of silk goods from these countries is very small. The following is a statement of the imports and exports of silk and mixed-silk manufactured goods from and into the Prussian Commercial Union, in each year from 1834 to 1836 :—

	Silk Goods.			Mixed-Silk Goods.		
	Imports.	Exports.	Excess of Exports.	Imports.	Exports.	Excess of Exports.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1834	254,985	559,079	304,094	106,950	320,265	213,316
1835	201,981	762,004	560,023	106,596	371,971	265,375
1836	225,581	847,826	622,245	121,236	404,435	283,199

The excess of exports from Prussia and the States of Hesse, previous to 1834, was about the same; but the proportion of imports and exports was different: the importation of silk goods was less, and the exportation of both kinds, particularly of mixed-silk goods, was greater. During the three years from 1834 to 1836 the total importation remained stationary; but the exportation of silk goods increased 51 per cent., and that of mixed-silk goods 26 per cent. The duty on the importation of the former is 110 dollars per centner, or 2*s.* 9*d.* per lb., which M. Dieterici estimates at about 5 per cent. on the value of the goods, reckoning a centner to be worth 2,000 dollars, or 50*s.* per lb. The import duty on mixed-silk goods is 55 dollars per centner, half of the above amount, which is therefore equal to 1*s.* 4½*d.* per lb., and this is estimated at 9 per cent. *ad valorem*, taking the value of a centner at 600 dollars, or of a lb. at 15*s.*

Adopting the preceding estimates, the total value of silk and mixed-silk manufactures exported from the Prussian Union in 1836 was 2,422,892*l.*, of which 2,119,500*l.*, or more than seven-eighths consisted of silk, and 303,327*l.* of mixed-silk goods. The imports in the same year amounted to 655,000*l.* A comparison with the trade of the United Kingdom in 1837-8 gives the following results: the quantity of silk goods, the manufacture of Europe, imported into the United Kingdom, on the average of those two years, was 218,185 lbs., which, estimated at 50*s.*, supposing the whole to be of silk alone, would be worth 545,462*l.* To this, however, must be added the value of 110,000 pieces of bandannas, and other silk handkerchiefs from India, entered for home consumption in the same period. Including these, the total value of imports of silk manufactures into the United Kingdom in 1837-8 was less than into the Prussian Union in 1836, at which time the importation of those countries was annually increasing. On the other hand, the value of silk manufactures exported from the United Kingdom in 1837-8 averaged 640,000*l.*, which is only a quarter of that from the Prussian Union in 1836.

Almost the whole of the silk manufactures exported from the Union were the produce of Prussia, and went from that country; and, on the other hand, she received only one-third of the quantities imported. This is shewn more exactly in the following statement relating to the year 1835:—

	Silk Goods.		Mixed-Silk Goods.	
	Imported.	Exported.	Increase.	Exports.
	lbs.	lbs.	lbs.	lbs.
Prussia . . .	70,542	729,826	37,782	346,397
Other States . .	131,438	32,178	68,814	25,574

Of the several provinces of Prussia the Rhenish provinces exported by far the greatest quantity, amounting to 58 per cent. of the whole; while Westphalia exported 26 per cent., and Brandenburg about 9 per cent. Of the imports Brandenburg received 60 per cent. Hence it appears, taking into consideration the respective number of looms in the Rhenish provinces and Brandenburg, with the comparative imports and exports of the two provinces, that the internal consumption of silk goods in the latter is greater than in the former, or that the goods manufactured in the latter are more extensively consumed within the Union than those of the latter. The comparison stands thus:—

	No. of Looms.	Imports. lbs.	Exports. lbs.
Brandenburg	2,315	64,717	95,171
Rhenish Provinces and Westphalia . .	11,491	29,809	883,260

Westphalia is here included with the Rhenish provinces, because it immediately adjoins those districts of the latter in which the silk manufacture is carried on, and because, having scarcely any manufacture of its own, the goods exported from it are the production of the Rhenish provinces.

As the quantities of raw and thrown silk imported into Prussia since 1831 are not stated in the official documents, it is impossible to say what quantity of silk manufactures are retained for the home consumption of Prussia and the other States of the Commercial Union; but from the smallness of the importation of raw silk in 1831, when the quantity of manufactured goods exported amounted to more than one-half of the exports in 1836, it is probable that the consumption of these countries is small, and very much below that of the United Kingdom.

Manufacture of Ribbons.—The preceding statements of the number of looms at work in Prussia refer only to those employed in the manufacture of piece-goods, exclusive of those employed in the fabrication of ribbons and hosiery. The following particulars will supply the same information with respect to these two branches of industry.

Ribbons are made of all the four materials used in weaving, but the Prussian tables do not distinguish the number of looms in which each kind is wrought, nor is it indeed probable that they could be so distinguished. All the provinces of Prussia partake in this manufacture, although it is very limited in some. There were, at the close of 1837,—

In the two westerly Provinces of Westphalia and the Rhine . . .	3,245
Saxony and Silesia	954
Brandenburg	119
Pomerania, Prussia Proper, and Posen	22

Total	4,340
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It will be seen, that more than three-fourths of the whole number of looms are established in the western provinces, particularly in the districts of Düsseldorf and Aachen. In the former, Elberfeld and Krefeld are the central points of this manufacture, as well as of that of silk goods. The number of looms in 1837,—

In the Circle of Elberfeld, was	970	} 1,193
„ Lennep „	273	
„ Krefeld „	196	
„ Kempen „	671	
„ Gladbach „	222	
In the Circles of Geldern, Cleve, Düsseldorf, and Solingen	26	

Total Number in the District of Düsseldorf . . . 2,308

In the district of Cologne, the capital and neighbourhood contained 60, and the circle of Gummersbach 10 looms; in that of Aix-la-Chapelle there were 39 looms within the circles of Erkelenz and Heinsberg. The district of Arnsberg contained 793 looms, of which 791 were in the circle of Hagen, and two in the adjoining circle of Bochum. The district of Münster contained 30, and that of Coblenz only 5 looms: the districts of Trier and Minden did not contain any.

Next to these two provinces the manufacture is most extended in Saxony and Silesia. The localities in which it is chiefly carried on are,—

The Town of Erfurt	Looms, 433
„ „ Magdeburg	230
In the contiguous Circles of Lauban, Löwenberg, and Hirschberg, within the District of Liegnitz	85
In the Circle of Reichenbach	24
Scattered over the remainder of Saxony	68
In the Province of Silesia	114

Total Number in Saxony and Silesia 954

The province of Brandenburg contained 119 looms, of which number 98 were in the city of Berlin. In Pomerania there were 4 ; in Prussia Proper, 13 ; and in Posen, 5. The official documents afford no information as to the quantities of ribbons manufactured or exported.

Manufacture of Hosiery.—This branch of industry is, like that of ribbons and silk, very limited in the eastern provinces of Prussia ; it is most extended in the Rhenish provinces ; but it is much less confined to particular localities than the manufactures above mentioned. The following was the number of looms in each province at the close of 1837 :—

	No. of Looms.	Per-centage Proportion of whole Number.
Rhenish Provinces	892	42·1
Saxony	351	16·6
Brandenburg	306	14·4
Westphalia	263	12·4
Silesia	249	11·8
Prussia Proper	38	2·7
Pomerania	14	
Posen	5	
Total		2,118
		100·

Of the 892 looms in the Rhenish provinces nearly one half were in the district of Düsseldorf: they were distributed over the province as follows :—

Districts.	Circles.	No. of Looms.
Düsseldorf	Elberfeld, Solingen, Lennep	156
	Krefeld and Kempen	137
	Other Circles	118
Cologne	Gummersbach	183
	City of Bonn	30
	Other parts	36
Coblentz	Chiefly in the Circles of Simmern and Wetzlar, but much scattered	161
Trier and Aix-la-Chapelle		68
Total		892

In Westphalia there are only two localities in which this manufacture is carried on to any extent, viz., the south-westerly part of the district of Arnsberg and the circle of Recklingshausen. The number of looms was,—

In Hagen, Altena, and Siegen (Arnsberg)	64
In the Circle of Recklingshausen	39
Scattered over the remainder of the Province	160
	<hr/>
	263

In the province of Saxony the number of looms was as follows :—

In the Towns of Magdeburg	118
„ Halle	47
„ Naumurg	20
„ Erfurt	48
„ Gefell	27
Other parts	91
Total	351

In Silesia the manufacture was chiefly confined to the circles of

Frankenstein, Neisse, and Habelschwerdt, in which there were 63 looms; in Liebenthal, in the circle of Löwenberg, 19; in other parts of the province, 167: total 249 looms.

In Brandenburg, Berlin contained more than half the looms within the province, viz.—

Berlin	176
Potsdam	16
Templin	31
The remainder of the Province	83
Total	306

The manufacture of stockings has of late years suffered greatly by the change in the use of that article of dress among the higher classes. Knitting by hand, which is carried on among the laboring population as an occasional employment, and among the wealthier classes as an amusement, continues to supply a great part of the hosiery required at so cheap a rate that no machinery can compete with it. There remain, therefore, on the one hand, only silken and very fine cotton hose, which require too much labor to be made by hand, and, on the other, the thick fulled woollen stockings, of bright colours, which are generally worn in some provinces by the lower classes, to afford occupation to their stocking manufacture. A new fabrication, however, has recently sprung up, to which Berlin has given a name, viz., the manufacture of cotton gloves; the use of which, as well as of silken gloves and mitts, has become very general in Great Britain and other European countries. The official documents furnish no particulars with respect to the extent of this branch of the hosiery trade.

Cloth Shearing, Dyeing, and Cotton Printing.—There remain only to be noticed some of those processes connected with the manufactures already described which are of a sufficient extent to be placed in a class by themselves. The first is the shearing and finishing of woollen cloths, which furnished employment at the close of 1837 to 3,480 persons. The number of individuals following this occupation in the several parts of Prussia by no means corresponds with the extent of weaving in each. In the large cloth manufactories these processes are carried on in the same establishment as the weaving, and the goods are finished and made fit for market without passing through the hands of a middle manufacturer. But many extensive commercial houses purchase large quantities of unfinished cloths at the place of manufacture, and convey them elsewhere for the purpose of being dyed, sheared, and fulled, under their own inspection.

No information has been collected respecting the bleaching of linen and cotton goods, or the establishments for dyeing raw silk. The number of persons employed in other kinds of dyeing amounted, in 1837, to 7,239, of whom 3,387 were masters, and 3,852 apprentices. This number includes only the operatives skilled in this process, and not the day-laborers who are employed in mere manual labor connected with it. Of the 7,239 dyers 2,281 were in the Rhenish provinces, 939 in Westphalia, 907 in Brandenburg, 848 in Prussia Proper, 825 in Saxony, 745 in Silesia, 376 in Pomerania, and 318 in Posen.

It is only in large establishments that the printing of calicoes and

other cloths can be carried to such a degree of perfection as is requisite in order to compete with foreign productions in beauty and cheapness. It appears that this branch of manufacture is carried on to a greater extent in Berlin, Eilenburg, and Breslau, than in any other part of Prussia. The number of persons to whom it afforded occupation in the year 1837 was as follows:—

	Masters.	Apprentices.	Total.
In Berlin	21	1,064	1,085
Eilenburg	3	773	776
Breslau	15	690	705
Elberfeld and Barmen	17	262	279
Cologne and Deutz	13	111	124
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Total in the above five Towns .	69	2,900	2,969
In the rest of Prussia . . .	902	1,302	2,204
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Total	971	4,202	5,173

It will be seen from this statement that cotton-printing is carried on upon a very different scale in different parts of Prussia. In the five towns above specified the average number of hands in each printing establishment is 42, while in Eilenburg it is 253. In the remainder of the country, however, there are not quite three hands to two establishments, so that in a great proportion of instances it must be carried on by individuals, and in none can there be any considerable number of hands employed under one roof.

It is surprising that this manufacture has so long been able to continue upon its present footing, and to maintain itself against the advantages which printing with rollers has over block-printing. It is very evident that in weaving, and in all branches of manufacture connected with it, every step in improvement and prosperity leads to a system of conducting business upon a larger scale; whilst manufacturing by hand must sink lower and lower until it is confined to the supply of the weaver's own wants. It will, therefore, be a source of great national advantage to Prussia when well-made machines shall be generally substituted for the wretched hand-looms at present in use, and her population shall be released from a profitless, disheartening, and oppressive labor: the change is in progress, and the manufactures of Great Britain already begin to feel its consequences, and to suffer in foreign markets from the competition which the yet infant manufactures of Prussia are able to maintain against the combined advantages of British skill, capital, and enterprise.

Having examined the several branches of manufacture separately, in order to shew the progress and condition of each, it will now be interesting to present at one view the extent which each has attained in the several provinces of Prussia. This is accordingly done in the following Table, marked (A), which shews the number of looms and spindles, as far as the same can be distinguished, in each province, at the close of the year 1837; the columns therein, marked *a* and *b*, contain respectively the number of looms in constant and in occasional employment. As this statement would be imperfect for the purposes of comparison without information respecting the amount of population in each province, the Tables marked (B) and (C) have been added; the first of which contains the area, the density, and rate of increase of

the population, and the proportion which the inhabitants of towns bear to those of the rural districts; and the latter exhibits the proportion which the number of looms bears to the population.

TABLE (A).

PROVINCES.	Linen Manufacture. Number of Looms.		Woollen Manufacture.		
	a	b	Number of Spindles.	Number of Looms.	
				a	b
Prussia Proper . .	789	98,849	3,550	557	2,185
Posen	1,225	22,245	35,965	997	129
Brandenburg . .	5,644	24,877	128,867	4,621	148
Pomerania . . .	2,298	35,326	13,912	528	406
Silesia	12,347	11,620	52,609	2,687	435
Saxony	4,237	13,503	52,398	2,506	354
Westphalia . . .	5,431	26,900	6,640	584	53
Rhenish Provinces .	3,906	12,974	107,269	4,457	375
Total . .	35,877	246,294	401,210	16,937	4,085

PROVINCES.	Cotton Manufacture. Number of Looms.		Number of Looms.		
	a	b	Silk.	Ribbons.	Hosiery.
			a	a	a
Prussia Proper . .	46	33	..	13	38
Posen	25	..	..	5	5
Brandenburg . .	4,898	250	2,315	119	306
Pomerania . . .	30	17	..	4	14
Silesia	17,739	2,581	76	114	249
Saxony	3,775	780	129	840	351
Westphalia . . .	2,847	703	116	828	263
Rhenish Provinces .	9,964	1,325	11,475	2,417	892
Total . .	39,324	5,689	14,111	4,340	2,118

TABLE (B).

PROVINCES.	Area in Square Miles.	Population in the Years		Per Centage Increase in 9 Years, from 1825 to 1834.	Number of Inhabitants to a Square Mile, in 1834.	Proportion of Town to Country Population in 1834.
		1825	1834			
Prussia Proper.	5,419	1,914,725	2,073,275	8.28	382	1 to 3.1
Posen	2,468	1,039,930	1,120,668	7.76	454	1 „ 3.
Brandenburg . .	2,608	1,478,871	1,651,320	11.66	491	1 „ 1.4
Pomerania . . .	3,362	846,722	941,193	11.15	361	1 „ 2.7
Silesia	3,412	2,312,687	2,547,579	10.15	746	1 „ 4.3
Saxony	2,119	1,361,582	1,490,583	9.47	703	1 „ 1.9
Westphalia . . .	1,693	1,184,589	1,292,902	9.14	764	1 „ 3.7
Rhenish } Provinces }	2,241	2,117,565	2,392,407	12.97	1,067	1 „ 2.9
Total . .	23,322	12,256,675	13,509,927	10.22	579	1 „ 2.8

TABLE (C).

PROVINCES.	Total Number of Looms.		Number of Looms to 10,000 Inhabitants.	
	<i>a</i>	<i>b</i>	<i>a</i>	<i>b</i>
Prussia Proper . .	1,443	101,067	7	487
Posen	2,257	22,374	20	199
Brandenburg . .	17,903	23,275	108	153
Pomerania . . .	2,874	35,749	30	379
Silesia	33,212	14,636	130	57
Saxony	11,838	14,637	79	98
Westphalia . . .	10,069	27,656	77	213
Rhenish Provinces .	33,111	14,674	138	61
Total	112,707	256,068	83	189

From these Tables it appears that in the three eastern provinces of the Prussian dominions—viz., Prussia Proper, Posen, and Pomerania,—in which agriculture is chiefly carried on, manufactures are very limited, with the sole exception of flax-spinning and the weaving of linens, which afford an occasional employment to the families of the agricultural laborers. Nearly two-thirds of the total number of looms engaged in this business within the Prussian States are found in these three provinces, and, on an average, 355 persons in every 10,000 possess a loom. With regard to population, this section of the kingdom is by far the most thinly inhabited, the average number of persons to a square mile being 399; while the increase of the population since 1825 in Prussia Proper and Posen, amounting to 8 per cent., was considerably less than in any other province. In Pomerania the increase has been above the average, but this is confined to the district of Cöslin, in which the population has increased since 1815 (nineteen years) no less than 44 per cent. None of the finer branches of manufacture, such as the silk, ribbon, or hosiery trades, is carried on in these provinces.

In Brandenburg the population averages 491 persons to a square mile, which is more dense than in the preceding provinces, but much less dense than in the remainder of the kingdom. The rate of increase, however, was 11·66 per cent., which is greater than in any part except the Rhenish provinces. Manufactures are very extensively carried on in Brandenburg: it contains more cotton spindles and woollen looms than any other province, and linen, cotton, and silk weaving flourish to a large extent. The proportion of the town to the country population in this province is very great: including Berlin, it is as 1 to 1·4; and, excluding that city, as 1 to 2·2.

In Silesia the country is densely populated (746 persons to a square mile), and the increase since 1825 was 10·15 per cent. Both the linen and cotton manufactures are carried on here to a greater extent than in any other province; the woollen manufacture is more limited, and the extent of the finer branches is very small. There are 130 looms regularly employed, and 57 occasionally employed, to 10,000 inhabitants. The latter system of manufacture is little followed in this province; it is comparatively greater in the cotton than in the linen or woollen trades. The proportion of the country to the town population in Silesia

is unusually great. The towns are few in number, and small in size, and hand-loom weaving is carried on to a great extent in the mountainous districts, where the weavers reside in detached cottages.

In Saxony the population is less dense than in Silesia (703 persons to a square mile), but the proportion residing in towns is nearly as great as in Brandenburg. The increase since 1825 has not been equal to the average of the kingdom. Manufactures of all kinds are carried on to a considerable extent, but the looms in occasional employment are more numerous than those regularly employed; the former are 98, and the latter 79, to 10,000 inhabitants. The ribbon and hosiery manufactures are prosecuted to some extent in this province.

Although Westphalia adjoins the Rhenish provinces, its condition, as regards both population and manufactures, is very different, with the exception of that part of the district of Arnsberg which touches and forms part of the manufacturing district of Düsseldorf. The number of inhabitants to a square mile in Westphalia is 764, in the Rhenish provinces 1,067. The increase since 1825 was 9·14 per cent. in the former, and 12·97 per cent. in the latter. There are in the former 77 looms constantly employed, and 213 occasionally employed, to 10,000 inhabitants; while the proportion in the latter is 138 looms constantly, and only 61 looms occasionally employed. In Westphalia the weaving of linens is carried on to some extent; but all other branches of manufacture are very limited, with the exception of that of ribbons, which belongs to the district adjoining Düsseldorf. In the Rhenish provinces, on the other hand, the manufacture of linens is small, while those of cotton (spinning and weaving), of wool, silk, ribbons, and hosiery, are very extensive. Westphalia approaches Silesia in the large proportion of the country to town population; but this arises not so much from the small number of towns as from the density of the population in the rural districts.

There exists great difficulty in comparing the extent of manufactures in the States of the Prussian Commercial Union with the extent to which they have attained in the United Kingdom. A comparison of the number of looms is insufficient, because the productive power of one loom differs enormously from that of another, and the machinery in use on the Continent is in general very defective. The quantity of raw material consumed, when it can be ascertained, affords a better criterion. With respect to flax, no data exist for estimating the quantities grown or brought into consumption. Of raw cotton the quantities left for consumption in the whole of the Prussian Union, in 1836, was under 18,000,000 lbs. The quantity entered for consumption during the same year, in the United Kingdom, was 363,650,000 lbs.; the amount of cotton-spinning, therefore, in the latter country, was twenty times greater than in the Union. But 32,731,000 lbs. of foreign cotton twist were imported into the latter countries, therefore the quantities of twist consumed in the two countries, in the same year, were 49,000,000 lbs. in the Union, and 253,000,000 lbs.* in the United Kingdom—the former amounting to about one-fifth of the latter. Of

* Deducting $1\frac{1}{2}$ oz. per lb. for loss in spinning from the quantity of raw cotton entered for consumption, and 88,000,000 lbs. of twist exported in 1836.

wool, the quantity left for consumption in Prussia alone, in 1834, was 24,000,000 lbs.; in the United Kingdom the estimated consumption, in 1836, was 179,000,000 lbs.,* or seven times as much. The consumption of wool in the other States of the Union cannot be shewn, as the amount of the produce of their flocks is not stated. Of raw silk the quantities imported into the Prussian States, which is the principal seat of the silk manufacture in Germany, was estimated at 700,000 lbs. in 1832. During the same year 4,373,000 lbs., or six times as much, were consumed in the United Kingdom.

The consumption of manufactures in Prussia is very much below that of the United Kingdom; and, therefore, notwithstanding the comparatively small amount of raw materials brought into use, a surplus of manufactured goods is left, which finds its way into foreign markets. There is no means of comparing accurately the quantities exported from the Prussian Union with the quantities of similar exports from this country, as the former are stated by weight, with scarcely any discrimination of kind or quality, and the latter in yards and pounds sterling. This deficiency, however, is of little consequence, as the British manufacturer is not so much interested in the actual amount of exports from these countries as in the questions of its increase, and of the price at which the goods can be produced and brought into those markets in which they compete with British manufactures. The latter is a subject distinct from the purpose of the present Paper, but the extent of the former has been shewn in the above statements up to the latest period to which the official documents extend. There is no doubt that during the last two years the manufactures of northern Germany have continued to increase rapidly; and Austria has likewise recently begun to turn her attention to manufactures. The governments of these countries not only protect this branch of industry by imposing heavy duties on the importation of foreign goods which might interfere with it, but are willing to advance large sums of money for the purpose of encouraging the establishment of manufactories, the introduction of improvements, and the application of British skill and enterprise to German undertakings.

With these advantages it is impossible to predict how soon, or to what extent, the manufactures of Germany will interfere seriously with those of Great Britain; they are as yet in their infancy, but their competition is already begun to be felt, not only in Central Europe but in other quarters of the globe. Still, while new markets are annually opening to European manufactures—while vast and populous countries, hitherto untrod by European foot, present new débouchés for the produce of the loom—while the consumption of Europe itself is rapidly increasing, and there yet remain civilized and flourishing countries, such as Prussia, in which the consumption of manufactures does not amount to one-half of that of Great Britain, there appears to be an ample field for the continued extension and prosperity of the manufacturing industry of both nations.

R.

* "Progress of the Nation," vol. i., p. 200.

Report of the Inspectors of Factories on the Effects of the Educational Provisions of the Factories' Act. By ALFRED A. FRY, Esq.

ON the 15th August of last year, the motion of Mr. Grote was acceded to without debate by the House of Commons,—“that Her Majesty would be graciously pleased to give directions, that each of the four Factory Inspectors do report separately, at the period of his Quarterly General Report, on the Effects of the Educational Provisions of the Factories' Act, as exemplified in not less than twelve of the schools situated in his district in which those provisions have been observed in the most efficient manner.” In pursuance of this resolution, separate Reports have been presented by the four Inspectors of Factories; and a joint Report by all, containing their united suggestions in reference to proposed alterations of the Act. Their reports were published by the House of Commons on the 20th February of the present year; and they present interesting matter in reference to the very important inquiry connected with the state of education in our great manufacturing districts. The result of the statements of the Inspectors is that, on the whole, considerable benefit is derived from the educational provisions of the Act; but that much greater advantages might follow if an improved system were adopted.

By the 18th section of the Factories' Act (3 and 4 Will. IV., c. 103), the Inspectors are required to enforce the attendance at school of children employed in factories, according to the Act, and to order vouchers of attendance to be kept in every school and factory.

By the 20th section, every child restricted to forty-eight hours of labor, in any one week, shall, while within the restricted age, attend some school, to be chosen by the parents, or by the Inspector in default of the appointment by the parents; and the Inspector may deduct from the weekly wages not more than 1d. in every shilling to pay for the schooling. And by the 21st section, it shall not be lawful to employ in any factory any child, restricted by the Act to forty-eight hours' labor in any one week, unless such child shall, on Monday in every week, give to the factory-master a voucher certifying that he or she has for two hours at least for six days out of the seven next preceding attended school, except in cases of sickness, or of absence from any cause allowed by the Inspector, or by any justice in his absence. By the 22nd section, whenever it shall appear to any Inspector that a new school is desirable, he is authorized to procure its establishment. And by the 23rd section, if any Inspector shall think any schoolmaster incompetent, he may disallow the order for any payment or salary to him.

Children in *silk* mills are not required to attend school; and factories used solely for the manufacture of *lace* do not come under the Act in any manner.

Mr. Horner observes in his Report, that “he trusts the education clauses will receive the special attention of Parliament, when the amending Act is brought forward; for the good they have already done in their present imperfect state, holds out great encouragement to persevere in making daily attendance at school an indispensable condition of the employment of children under thirteen years of age. The Factories' Act has assisted in exposing to public view the very low state of

this country in all that relates to the education of the laboring and indigent classes ; and if its educational provisions be made more effective, it may be the means of correcting that evil to a considerable extent."

The question of restricting the labor, and providing for the education of factory children, is at present under the consideration of the French government ; and in the State of Massachusetts, a law has been in force for nearly three years, which enacts that no child under the age of fifteen years shall be employed to labor in any manufacturing establishment, unless such child shall have attended some public or private day-school, where instruction is given by a teacher qualified by law, at least three out of the twelve months immediately preceding every year in which such child shall be employed. Thus while in this country the age at which children are exempted from compulsory attendance at school is thirteen, it is fixed in the principal manufacturing province of the United States at fifteen.

Mr. Horner states, that when the number of children is sufficient to provide by a moderate school-fee for the adequate remuneration of a good teacher, and when the mill-owner takes an interest in their education, schools will generally be established on the premises ; and this has already been done in many instances, and at the sole expense of the owner. But where the number is small, the education must be had out of the factory ; and here lies the difficulty of executing the Act, which requires education to be given, but does not provide suitable schools where none exist. The clause inserted for that purpose supplies no funds for their establishment, and however willing the parents may be to pay the weekly charge for their children's education, they are unable to unite to build and furnish a school.

Unless, therefore, good primary schools be established generally throughout the country, or unless schools be specially provided for factory children at the public expense, Mr. Horner considers that the educational provisions must continue to be inefficient in by far the greatest proportion of instances, except where good schools are voluntarily kept on their premises by the proprietors.

Mr. Horner furnishes a list of thirty factories within his district in which the educational provisions of the Act have been observed in the most efficient manner, the owners having taken pains to carry them into effect by establishing good schools on the premises, or availing themselves of the best in their neighbourhood. In others, the arrangements for the education of the children are in progress of improvement, and in many the children receive quite as much instruction as a large proportion of those attending common schools in the districts examined by the London and Manchester Statistical Societies.

Of the above thirty schools, all but one are in Lancashire. The number of children under thirteen contained in them is 1,820, of whom 1,115 are boys, and 705 are girls.

In 4	is taught reading only.
„ 7	are taught reading and writing.
„ 2	„ reading and sewing.
„ 4	„ reading, writing, and arithmetic.
„ 4	„ reading, writing, sewing and knitting.
„ 3	„ reading, writing, arithmetic, sewing and knitting.
„ 6	„ the same, together with geography, and, in one instance, singing.

In sixteen schools, containing 1,002 children, the school-fees are paid by the mill-owner, and the children receive instruction gratuitously. In three others the expenses are partly paid by the mill-owner, the children contributing only 1*d.* per week in two of them, and 2*d.* or 3*d.* per week in the other. In five other schools the children pay 2*d.* a week; in five 3*d.*; and in one 4*d.* Five of these schools have been established from four to five years, and consequently were in operation before the passing of the Factories' Act. In twenty-one instances the school is situated on the premises, and in nine it is not. The books generally in use are the Bible, Testament, Church Catechism, Hymns, Reading-made-easy, Spelling-books, Edinburgh Sessional, and Irish National School-books. In one school the History of England was used.

Mr. Howell, in his Report, observes, that "when the full term of eight hours' daily labor in the mill is exacted for the purpose of employing three children working eight hours each, upon what is termed the relay system, to do the work which would otherwise be performed by two persons working twelve hours each, it will be seen that it is impossible that the children so employed should be able to attend school daily at the hours, either in the forenoon or afternoon, at which ordinary schools are open. When, therefore, the master of a factory determines to avail himself in this manner of the full period allowed by law for the employment of children between 9 and 13 years of age, he must contrive to establish some kind of school which shall be accessible to his factory children at broken periods of the day, when ordinary schools are not available for them; and as the ordinary hours of common day-schools are not adapted to factory children working eight hours daily, so neither would the hours of a factory-school be suitable to children of any other class." Mr. Howell, therefore, in a subsequent part of his Report, concludes that "the real difficulty which embarrasses the educational provisions of the Factories' Act appears to lie in the attempt to combine good daily tuition in a school with eight hours' daily work in a factory."

But that this may be easily overcome in a well-regulated factory is proved by instances both in Mr. Horner's and Mr. Saunders's Reports. The latter gives an instance in which the children go to work in fourteen classes at different hours in the morning, forenoon, afternoon, and evening; and attend school in seven classes with perfect regularity. Among the 30 mills described by Mr. Horner, the children in 5 attend school in four sets, in 10 they attend in three sets, in 10 in two sets, and only in 3 in one set.

The Report of Mr. Saunders is very full and detailed. He arranges his observations under two heads, viz., 1st, the practicability of employing one set of children for a smaller number of hours than the older hands, and of combining education with this partial occupation of their time; and, 2ndly, the effect of the Educational Clause, as exemplified by the advantages derived from the system of obligatory education, as a condition on which the employment of children under 13 years of age in a factory can be obtained.

On the first head Mr. Saunders adduces instances of cotton, woollen, worsted, and flax mills, situated under four very different circumstances,

viz., large mills in towns, and the same in country places, also small mills in both situations, in all of which children under 13 years of age are employed by relays. He also brings forward the instance before quoted in which there are 14 classes, not as recommending the adoption of so many divisions, but in proof of what a reasonable degree of care and method can accomplish; and he arrives at the conclusion that it is perfectly practicable to unite factory labor and education during the first years in which children are employed in mills. This opinion is strengthened by the assurance of several mill-occupiers, that if the Factory Act were repealed, they would continue to work by relays and educate the children.

On the second head he observes, that "as the Educational Clauses were not virtually in operation until June, 1836, few persons can as yet have received the four years' education contemplated that they should hereafter have when they enter a factory at 9 years old."

Still the effects of those clauses are already perceptible; and the general testimony of the mill-owners, their overlookers, and the parents of the children, is, that the scholars become more tractable and better behaved, while their moral habits are improved. Many of the mill-owners now approve of education who formerly deemed the application of it almost impossible, and not likely to be in the least degree beneficial. The following statements, from the Report of Mr. Baker, one of the Superintendents of Factories, are highly interesting, as shewing the contrast between the education in mills in which the schools are altogether inefficient, and others in which the attention of the parochial clergy and resident gentry has effected a partial improvement through good Sunday-schools; and, also between those in which the daily education is good. The first refers to the Pudsey district, which is stated to afford a fair example of the real condition of the clothing districts in regard to education. In 18 mills there are employed 325 children under 13, and 295 between 13 and 18 years of age. The following are the respective degrees of instruction possessed by each class:—

	Under 13.	Between 13 & 18.	Total.	Per-Centage Proportion.
Can read the Testament . . .	51	83	134	21·6
„ Spelling-book . . .	74	44	118	19·
„ Primer . . .	108	93	201	32·4
„ Alphabet . . .	45	44	89	14·4
Cannot read	47	31	78	12·6
	<hr/> 325	<hr/> 295	<hr/> 620	<hr/> 100·

Thus out of 620 persons, of whom 295 are above 13 years of age, 486, or 78 per cent., cannot read the Testament. Of the total number, only 59, or 9 per cent., attend Sunday-schools.

Where, however, the clergy or gentry have exerted themselves to improve the moral and intellectual condition of the operatives, a different result is manifest; although, as the following table will show, a state of great mental neglect is everywhere general. In 49 mills within a short distance from Leeds, in a locality both manufacturing and rural, there are 1,584 persons under 18 years of age, of whom 439 are under 13. Adopting the same test as before,—

	Under 13.	Between 13 & 18.	Total.	Per-Centage Proportion.
Can read the Testament	169	615	784	49·4
„ Spelling-book	86	268	354	22·4
„ Primer	126	223	349	22·
„ Alphabet	32	39	71	4·5
Cannot read	26	..	26	1·7
	439	1,145	1,584	100·

Of these, 873, or more than one-half, attend Sunday schools; but even here the proportion of those who cannot read the Testament is 50 per cent., although the proportion of the wholly ignorant, and of those beginning to spell, is reduced from 27 to 6 per cent.

The advantage of a good systematic factory education, where the value of intellectual culture is understood and applied, and where the mill-owner is desirous of improving the moral and social condition of his work-people, is shewn in the following account of Messrs. Marshalls' mill at Holbeck, where no expense is spared to secure to the operatives the opportunity of obtaining a good education. The number of hands employed under 18 years of age is 888, of whom, however, only 287 come under the educational clauses. The amount of instruction which they possess is as follows:—

	Under 13.	Between 13 and 18.	Total.	Per-Centage Proportion.
Can write. . . . .	..	328	328	..
Can read the Testament	161	266	430	48·4
„ Spelling-book	65	135	200	22·5
„ Primer	54	121	175	19·7
„ Alphabet	4	36	40	4·5
Cannot read . . . . .	..	43	43	4·9
	287	601	888	100·

Of the above number, 752, or five-sixths, attend a Sunday school; nearly one-half of all the hands under 18 are able to read the Testament; but of those under 13, who come within the operation of the Act, 57 per cent. can read the Testament, and the remainder are much further advanced than in the schools previously noticed.

Again, in 13 mills at Leeds and Bradford, where the schools are on the premises, and are conducted on good systems, the following progress has been made: the number of children under 13 years of age employed is 487, of whom some have been in attendance in the mills and schools for three years, and one or more only for one day. The condition of the same children when they entered the mill, and when the Report was made, is thus contrasted:—

	On coming to the Mill.	At the present Time.
Could read the Testament	147	296
„ Spelling-book	116	149
„ Primer	121	37
„ Alphabet	91	7
Could not read	16	1

Thus 60 per cent., or three-fifths of the children under 13, could read the Testament fluently. But the mere reading of the Testament is nothing, unless they understand what they read, and unless the

effect is perceptible in the improvement of their moral condition. In the mills last described, and in those conducted on the same good system, the children do seem to understand what they read; while, in those previously described, they can hardly reply to any question, or interpret any word required of them.

It appears, therefore, that the educational clauses have been already productive of some advantages to the factory youth, and are susceptible of much greater. So far from their being a hindrance to the mill-owner, they are a benefit in well-conducted factories, by establishing a spirit of subordination and regularity which did not previously exist, and by securing the attendance of respectable and decent children, whose parents prefer the mills in which there are well-conducted schools. It is to be regretted, that the advantages thus obtained by the children under 13 years of age are not in some way continued till they are 18 or 20 years old; and though many of them attend Sunday schools after the age of 13, yet it is to be feared that frequently the instruction obtained while they are compelled to attend daily at school, may altogether, or in a great measure, be lost. Messrs. Strutt, of Belper, to remedy this defect, compel all the young persons they employ to attend a Sunday school, until they are 20 years of age; and such improvement has generally been made, that most of the clerks and overlookers in their several establishments have belonged to this class.

It might be feared that the adoption of strict regulations, and a systematic control over the conduct of the operatives in a factory, might deter persons from entering such establishments; but so far is this from being the case, that Messrs. Shelton, of Leeds, in whose mill very stringent rules are observed, state that "they have never experienced any difficulty in getting work-people, on account of the nature of their regulations; but, on the contrary, they assert, without hesitation, that these have been found by them conducive to their best interests; that at different times they have had applications for employment from individuals who were desirous of the benefit of being obliged to conform to their rules, in order that they might be assisted in their endeavours to reclaim themselves from vicious habits; and they have had instances in which the parties were formerly incorrect in their conduct, but have been entirely changed, and are now steady orderly men."

The testimony of Archdeacon Lyall to the good influence of a well-conducted factory upon the surrounding population is very valuable. Speaking of Messrs. Brown's silk mill, at Hadleigh, in which very strict regulations are maintained by a committee, independent of the proprietor, he states "that nothing can be more satisfactory than the conduct of the children, who amount to between 300 and 400. I do not remember that a single complaint has been preferred against a factory girl for the last six months. Their progress in the school is also satisfactory (they are divided into four classes); the girls read one day, and are taught to sew another, as also to knit, &c. Instead of causing immorality or disorder in the town, the factory, under these simple regulations (the existence of which is sufficient, for a case seldom occurs for exercising them), has been a greater blessing to the town than I can express. When I came to Hadleigh, five years ago, it had the reputation of being the most turbulent and disorderly place in this part of

Suffolk. At present there is not a quieter town in England; and I attribute this, in a very considerable degree, to the factory." The Archdeacon further says, that "under ordinary circumstances any factory in which children only are employed, might be rendered not merely a place from which immorality and vice might be excluded, but a more efficient school of religious and useful habits than any mere educational seminary could possibly be."

One great obstacle to the improvement of the system of education, not only in factories but in the country generally, is the want of good schoolmasters. To this point both Mr. Horner and Mr. Saunders call attention: the former states that "it is not at all an unusual thing to have certificates presented to us subscribed by the teacher with his or her *mark*: this generally happens in the case of female teachers; but they are held to be equal in qualification to the majority of those who keep 'dame schools.' In the last quarter I had a school-voucher presented to me with a '*mark*;' and when I called on the schoolmaster to read it before me, he could not. It had been written out by the clerk of the factory, and the schoolmaster had been called to put his mark to it. I have had to reject the school-voucher of the fireman, the children having been schooled in the coal-hole (in one case I actually found them there), and having been made to say a lesson, from books nearly as black as the fuel, in the interval between his feeding and stirring the fire of the engine-boiler. It may be supposed that such a thing could only happen at the mill of some poor ignorant man; but that, I am sorry to say, was not the case, for it occurred at factories where a large capital must be embarked."

Mr. Baker quotes several instances of the incapacity of the teachers, of which the two following certificates afford a specimen:—

1. "This to sertfy that 1838 thomas Cordingley as atend martha insep school tow hours per day January 6."

2. "Sir. The reason P. Harrison left me I suppose to be his objection to pay my demands, as he left me in arrears. Elizth Northern has not and will not pay me a penny ever since she came to me; her plea is that you stop it out of her wage.—If you please Sir, If you plase Fairplay's a Jewel.
"E. Hinchcliffe."

Mr. Baker adds, "Factory-schools are of many kinds, from the coal-hole of the engine-house to the highest grade of infant education. The engine-man, the slubber, the burler, the book-keeper, the overlooker, the wife of any one of these, the small shopkeeper, or the next-door neighbour, with six or seven small children on the floor and in her lap, are by turns found 'teaching the young idea how to shoot,' in and about their several places of occupation for the two hours required by the law. Few, how few, good schools are here and there bestowing upon so important a community as the manufacturing classes the benefits of a national system of education and of moral training, to fit them for their future station, and impress them with its relative duties! I do not think that, among the 500 mills under my superintendence in the West Riding of Yorkshire, I should be able to name a dozen schools where the education is systematically good, and the mill-owner personally cognizant of the progress of his children, although in between 300 and 400 of these mills short-time children are made use of. In all the rest, that

which is called education may be given, or may not. The amount per week is paid for it, in nine cases out of ten, by the master; and the certificate testifies that each child has attended two hours per day, in conformity with the enactment."

Mr. Saunders, judging from the replies sent to him by various mill-owners and schoolmasters, in answer to circulars issued to them by him, and more especially by the reports of his three intelligent superintendents, Mr. Bury, Mr. Baker, and Mr. Bates, arrives at the conclusion that considerable good has been effected, but "*that whatever benefits may have been derived, are very trifling as compared with what might be effected under an improved system*, which shall facilitate and encourage the establishment of good district schools under efficient teachers, especially if some reasonable and satisfactory plan could be adopted to increase the opportunity for young persons between 13 and 18 attending evening schools for one hour."*

The last Report proceeds from Mr. Stuart, the Inspector for Scotland and Ireland; and he remarks that those countries stand on a different footing to England in respect to the provisions now in question: for that in Glasgow, Paisley, Aberdeen, and Belfast, mill-owners have no difficulty in procuring a sufficient number of young persons above 13 years of age; and accordingly, so few are employed under that age, that no school has been established under the Act in any town within his district. And in Ireland the number of young persons above 13 years old is so great, that factory owners hardly at all employ children not more than 13 years of age. "It is, therefore," Mr. Stuart says, "almost exclusively at country factories in Scotland, where a considerable number of workers is employed, that schools connected with the factories are to be found in my district." He then specifically details the operations in the various mills within his district under the Act, deducing the conclusion that "the educational provisions are there in due observance, but that their effect is limited," from the circumstances above referred to. "At most of the large country factories in Scotland schools had, previously to the passing of the Act, been esta-

* The Statistical Society of Manchester, in their valuable Report on the State of Education in Liverpool (in 1835-36) state the same results as observable there. "In their Report on the State of Education in Manchester, the Committee came to the conclusion that the vast majority of the children who attend the dame-schools receive no instruction which is at all deserving of the name; and that of the children who attend the common day-schools, the greater part receive an extremely poor education. They came to a nearly similar conclusion in the case of Salford; and they might now, with equal truth, apply nearly the same words to the same two classes of schools in the borough of Liverpool. Of the proximate causes of the inefficiency of this class of schools, those which appear to the Committee to be most prominent, are, first, the want of adequate means for their support; and, secondly, the non-existence of a class of capable and willing teachers, who take an interest in their occupation: and the Committee would here observe, that each of these causes in some degree re-acts upon the other; that the want of funds is one, although not the only, cause of the want of proper teachers; and that the general incompetency of the teachers, and the consequent inferior quality of the instruction given, is in many cases a reason why the parents will not consent to make a greater pecuniary sacrifice to have their children educated." Similar instances of the ignorance of the teachers are then detailed as those stated by Mr. Baker; and in the Report on the State of Education in Bolton (1837) the Society have to present the same lamentable facts.

blished by the factory owners and occupiers; the only effect of the educational provisions of the Act having been to insure the regular weekly attendance of the children for the statutory period; and at the smaller country factories good schools connected with them have been set a-going since the passing of the Act, which the children attend for the statutory period. Reading, writing, arithmetic, and geography are taught at all these schools by well-qualified persons; and, at many of them connected with the large factories, the proficiency of the children is remarkable." There seems no fault to find here; and it would be well if the manufacturing districts in England could be put upon an equality in this important respect with Scotland.

The Inspectors then present a joint Report in pursuance of the second part of the resolution moved by Mr. Grote,—that they should jointly report as to any modification of the existing educational provisions which may appear to them desirable.

The Inspectors accordingly unite in several suggestions which will receive the attention of Parliament; as that the parents should not have the complete power (as at present) of selecting the school; that the Inspectors should be able to enforce payment, out of the wages, of not more than 3*d.* per week for schooling; that holidays should be allowed every Saturday; that the form of granting a license for absence from school should be abolished; and that the master should not be compelled (as now) immediately to discharge a child who has neglected attendance at school, which has often the effect of inconveniencing the master and punishing him for the fault of the child. These are mere matters of detail; but the concluding suggestions refer to topics of great interest and importance: and we cordially concur in the desires expressed by the intelligent and experienced Inspectors.

Several mill-occupiers in the districts of Mr. Horner and Mr. Saunders have expressed a willingness to unite in the support of a school in a central position, which may be used in common by the children employed in several neighbouring factories; and it has been urged that there is a great probability that some such schools would be speedily brought into operation, more especially should the assistance of Government hereafter mentioned be obtained, if it were enacted that it shall be lawful for any number of persons to agree with each other for the establishment of a school for the use of the children employed in factories, and to make rules for the management and for defraying the charges thereof, and to insert in their agreement penalties for the breach of conditions therein, and that the penalties may be recovered and applied as other penalties under the Act.

We venture farther to suggest, "that wherever it shall appear to any Inspector that a new or additional school is necessary or desirable, to enable the children employed in any factory to obtain the education required by this Act, it shall be lawful for the Lords Commissioners of Her Majesty's Treasury to appropriate such sum as may appear to them necessary for the building, enlarging, or otherwise establishing such schools out of any money which may have been granted by Parliament for promoting education, under such securities for the public interest, and under such restrictions, as their lordships may consider the circumstances of the case to require."

Number and Nature of Robberies in London and Liverpool during the Year 1838.

THE following statements of the amount of property known to be stolen in the Metropolitan Police District, and in Liverpool, during the last year, will be interesting. Of course they include only the felonies which came under the cognizance of the Police, and it is impossible to conjecture what proportion these bear to the number actually committed; they will serve, however, to prove the exaggeration of the estimate put forth by Mr. Colquhoun at the commencement of the present century, in his work upon the Police of the Metropolis. That author estimated the amount of the depredations annually committed on public and private property in the metropolis and its vicinity, at 2,000,000*l.*, consisting of—

1. Small thefts—of metal, furniture, household materials, goods from shops, wearing apparel, &c. &c.	£.
2. Thefts upon the rivers and quays of merchandize and ships' stores	710,000
3. Thefts in the dock-yards and warehouses on the Thames	250,000
4. Burglaries, highway-robberies, private stealing, picking pockets, cattle and fruit stealing	200,000
5. Coining base money.	280,000
6. Forging bills, swindling, &c.	310,000
	250,000
	<hr/> £2,000,000

If this amount be compared with the following return for the past year, it will be seen that—making every allowance, on the one hand, for the city of London being omitted from the latter statement, and for the present improved system of police; and, on the other, for the wider circle to which the Metropolitan Police District extends, and the great increase of population and wealth since the commencement of the century—the above estimate must be very incorrect, for it cannot be credited that less than 2 per cent. of the felonies committed should become known to a numerous and vigilant police.

No comparison can be instituted between London and Liverpool, as the return for the former is incomplete, from the city not being included, and the population of the two districts cannot be stated with any degree of accuracy: but the following points are worthy of notice. Of the total amount of property stolen only $8\frac{1}{2}$ per cent. was recovered in London, and $11\frac{1}{4}$ per cent. in Liverpool. The return for London, however, includes a very large robbery of jewels, to the amount of 2000*l.*, which have not been recovered. As a general result it may be stated, that of property stolen and reported to the police only one-tenth is likely to be recovered. In the Metropolitan District the number of felonies is given; and, therefore, the average amount of property stolen upon each occasion may be estimated. If the above large robbery be included, it is only 49*s.* 4*d.*, and if it be excluded, 46*s.* In Liverpool more than one-fourth of the property stolen was taken by prostitutes; in the Metropolitan District only one-twenty-fourth. As the large proportion in the former town arises from the number of sailors who frequent that port, and as the same cause appears to exist in the metropolis, it is difficult to account for so great a difference, unless such offences come under the cognizance of the city police.

Such statements as these are highly valuable, as indicating the character and tendency of crime in different places, and as calling attention to the measures which it behoves individuals, as well as the Government, to adopt, in order to check its progress, and remove as far as possible the inducements to its perpetration.

Return of the Number of Felonies committed within the Metropolitan Police District, distinguishing those for which the Police were responsible from those which could not have been prevented by any vigilance on the part of the Police, with the Amount of Property Stolen and Recovered, in the Year 1838.

NATURE OF FELONIES.	Police Responsible.		Police not Responsible.		Amount since Recovered
	Number.	Loss.	Number.	Loss.	
		£.		£.	£.
Burglary	92	827	..	..	62
Breaking into a dwelling- house, &c.	41	213	..	..	22
Breaking into a building, shop, &c.	55	317	..	..	67
Embezzlement . . . . .	..	..	225	733	66
Forgery . . . . .	..	..	13	184	7
Fraud . . . . .	..	..	162	206	31
Horse-stealing	19	128	..	..	64
Robbery on highway	41	64	..	..	2
Sheep and cattle-stealing . .	17	20	..	..	2
<i>Larcenies (Common).</i>					
Goods, &c., exposed for sale .	..	..	2,143	1,377	204
Tools, lead, glass, &c., from unfinished houses }	450	395	..	..	16
From carts or carriages . . .	..	..	315	794	142
Linen, &c., exposed to dry . .	..	..	452	317	25
Poultry, &c., exposed in an outhouse	581	394	..	..	11
<i>Larcenies in a Dwelling-house, &c.</i>					
By false keys only . . . . .	..	..	280	2,461	18
„ lodgers . . . . .	..	..	1,266	2,132	245
„ servants . . . . .	..	..	1,125	3,809	954
„ doors being left open . . .	..	..	1,282	2,891	237
„ false messages, &c. . . . .	..	..	357	962	81
„ lifting up window or breaking glass }	417	1,312	..	..	14
„ means unknown	446	5,174	..	..	92
<i>Larcenies from the Person.</i>					
Picking pockets	653	2,003	..	..	55
From drunken persons . . . .	..	..	273	643	23
„ children	107	67	..	..	1
By prostitutes . . . . .	..	..	747	1,196	44
Total	2,919	10,914	8,670	17,705	2,485
Total Police Responsible	..	..	2,919	10,914	..
Total . . . . .	..	..	11,589	28,619	..

Abstract of the Amount of Property Stolen and Recovered within the Borough of Liverpool, as far as the same has come under the cognizance of the Police, during the Year 1838.

NATURE OF FELONIES.	Amount of Property	
	Stolen.	Recovered.
	£. s.	£. s.
Robberies on the highways and streets	142 2	4 8
Breaking into dwelling-houses by night	898 0	137 4
" " by day	398 11	28 17
" warehouses and offices	222 17	25 10
" shops	156 0	2 9
Sacrilege	19 0	..
Stealing from dwelling-houses,—		
By false keys	552 0	45 7
" lodgers	338 14	11 0
" servants	369 0	55 4
" doors left open	634 15	9 11
" windows	449 2	12 2
" pretended messengers	93 0	6 16
" other means	872 0	90 10
Stealing from offices, warehouses, and shops,—		
By breaking or lifting windows	6 14	1 16
" false keys	107 12	..
" pretended customers	398 1	53 8
" shopmen, clerks, and office-boys	129 14	20 14
" warehousemen	48 6	44 10
" other means	2,717 2	31 13
Breaking into ships and vessels in dock	60 13	0 6
Stealing from ships and vessels in dock	462 13	96 10
" dock quays	306 17	236 5
Cattle-stealing	8 10	..
Stealing goods exposed for sale in the streets	112 11	40 1
" from yards and sheds, and articles left in } the streets	122 0	17 14
" from carriages and carts in the street	74 10	4 11
" lead, tools, &c., from unfinished buildings, &c.	143 13	11 1
" linen, &c., exposed to dry	36 1	3 4
" poultry from out-houses	10 18	0 9
" from letters	110 0	..
Stealing from the person,—		
By pickpockets	323 2	18 5
From drunken persons	301 3	19 3
" children	12 16	1 14
By prostitutes	4,402 13	567 5
" other means	60 2	8 14
Ring-dropping	9 10	..
Obtaining money and goods by false pretences	100 13	18 2
" " by other means	240 7	4 0
Embezzlement	395 11	147 12
Receiving stolen property	119 14	15 10
Illegally pledging	25 9	4 13
Total	15,991 16	1,796 0

PROCEEDINGS OF STATISTICAL SOCIETIES.

STATISTICAL SOCIETY OF LONDON.

General Anniversary Meeting, Friday, March 15, 1839.

The Right Hon. Earl FITZWILLIAM, President, in the Chair.

The Fifth Annual Report of the Council for the Session 1838-39, and the Report of the Auditors for the year 1838, were read and adopted.—(For Report *see* p. 129, and for Balance Sheet *see* p. 134.)

George William Wood, Esq. M.P. and James Whishaw, Esq. were appointed Scrutineers of the Ballot for the Council and Officers; and those gentlemen having reported the result of the votes, it was announced from the Chair that the following Members were duly elected as the Council and Officers:—

COUNCIL.

Sir John Boileau, Bart.
The Right Hon. Sturges Bourne, F.R.S.
John Bowring, Esq. LL.D.
John Clendinning, Esq. M.D.
Rev. E. Wyatt Edgell.
T. R. Edmonds, Esq.
Right Hon. Earl Fitzwilliam, F.R.S.
Francis H. Goldsmid, Esq.
Woronzow Greig, Esq. F.R.S.
Henry Hallam, Esq. F.R.S.
James Heywood, Esq. F.R.S.
James P. Kay, Esq. M.D.
Charles Knight, Esq.
The Marquess of Lansdowne, F.R.S.
Sir Charles Lemon, Bart. M.P., F.R.S.
Nathaniel Lister, Esq. M.D.

The Right Hon. Holt Mackenzie.
C. Hope Maclean, Esq.
Herman Merivale, Esq.
The Lord Bishop of Norwich.
W. Smith O'Brien, Esq. M.P.
G. R. Porter, Esq. F.R.S.
C. W. Puller, Esq.
Rawson W. Rawson, Esq.
Edward Romilly, Esq.
Lord Viscount Sandon, M.P.
Colonel Sykes, F.R.S.
Thomas Tooke, Esq. F.R.S.
Captain A. M. Tulloch.
David Urquhart, Esq.
George Wm. Wood, Esq. M.P.

OFFICERS.

President.—The Right Hon. Earl FITZWILLIAM, F.R.S.

Treasurer.—HENRY HALLAM, Esq. F.R.S.

Honorary Secretaries.

James Heywood, Esq. F.R.S.; Charles Hope Maclean, Esq.; Rawson W. Rawson, Esq.

The following Resolutions were carried:—

That at the conclusion of the first clause of Rule 24 of the Society's Regulations, there be added the words, "unless the right of property be especially reserved to themselves by the contributors of communications."

That it is desirable to change the apartments of the Society.

That the following words be substituted for the last paragraph of the 23rd Rule:—"In the absence of the President and Vice-Presidents, any Fellow of the Society may be called upon, by the Fellows then present, to preside at an Ordinary Meeting, who may admit Fellows, but shall not be empowered to act otherwise as President or Vice-President."

The noble President having vacated the chair, it was taken by Sir C. Lemon, Bart. M.P., Vice-President; and a vote of thanks to his lord-

ship was unanimously carried for presiding on the present occasion, and for his services in promoting the interests of the Society.

Fifth Ordinary Meeting, Monday, 18th March, 1839.

Sir CHARLES LEMON, Bart. M.P., Vice-President, in the Chair.

Lieutenant-Colonel Pringle Taylor.

Michael Thomas Bass, Esq.

Charles Jellicoe, Esq.

Trevenen James, Esq.

were formally admitted as Fellows.

The following Gentlemen were proposed as candidates for admission:—

The Hon. W. R. Rous, Worstead House, Norwich.

Lewis Vigars, Esq. Downing College, Cambridge.

John Richards, Esq. Cadogan-place.

E. Ayshford Sandford, Esq. M.P. Nynehead, Somerset.

Peter Baume, Esq. North-road, Holloway.

Richard M. Muggerridge, Esq. Assistant Poor Law Commissioner, Manchester.

The following Gentlemen were elected:—

Bernard Hebel, Esq. York-place, Portman-square.

Henry John Baxter, Esq. Middle Temple.

William Augustus Guy, M.D., Cantab. Professor, King's College.

Alexander Johnston, Esq. Baillie of Glasgow.

Henry Reeve, Esq. Chapel-street, Grosvenor-square.

A Paper was read on the Progress and Present Extent of Manufactures in Prussia, by Rawson W. Rawson, Esq., Honorary Secretary (*see p. 135*).

STATISTICAL SOCIETY OF ULSTER.

THE regular meeting of this Society took place in the Museum on Friday evening, the 4th January, the Rev. John Bradshaw in the Chair.

After the routine business of the Society was disposed of, and several new Members proposed for admission, Mr. Getty read some notices of the annual Reports of the Poor Law Commissioners, which received increased interest from the circumstance of the Belfast Union having been declared on the 1st instant.

In the course of the conversation which afterwards ensued, one gentleman mentioned a fact which bears on the question of relief in kind. He was in the habit of giving weekly alms in money to the mendicants of his parish. The number who applied was about thirty. On substituting relief in kind it was at once reduced to fifteen. Another fact was stated by the same gentleman. The mendicants are alarmed at the mention of confinement in workhouses, and enquire anxiously how they can evade this, expecting, when a union is formed, to get beyond its limits into some neutral ground. This shews the necessity of commencing operations in all places at the same time.

A Committee was then appointed to observe and record the operation of the new Poor Law in the Belfast Union, to enable the Society to judge of the effect of the great experiment now to be tried in this country.

At the Monthly Meeting, 25th January, Samuel Bryson, Esq., in the Chair, a number of ordinary members were elected, and George Nicholls,

Esq., the Commissioner of Poor Laws, was added to the list of honorary members. The Earl of Caledon, the Secretary stated, had, since last meeting, become a life member.

A communication was received from Sir Robert A. Ferguson, Bart., M.P., containing a classification of the County Cess for the Counties of Tyrone and Derry. This it is intended to publish as a model for other Counties; and for the purpose of obtaining similar returns, blank forms are in preparation. Mr. Bryce reported from the Education Committee that they had perfected the series of queries entrusted to them, which were in the hands of the printer.

At the Monthly Meeting, 1st February, Alexander Mitchell, Esq., C.E. in the Chair, a communication was read from the Rev. William Bruce, urging the Society to procure "as authentic a statement of the particulars of the late storm as possible—its limit as to breadth—the direction of the wind—height of barometer, and range of thermometer, during its continuance—the electrical state of the atmosphere, both at the time, previously, and subsequently; and, what seems very important, the line of direction which it took in laying waste plantations, &c." Mr. Bruce, at the same time, communicated the observations he had himself made at the time. A letter was read from Mr. Whitla, one of the Secretaries to the Society, calling their attention to an advertisement published by the Royal Dublin Society, inviting communications respecting the kinds and circumstances of the trees which suffered during the storm, anticipating that some national advantage may be gained, by determining, from the actual state of timber of different ages, what kinds are best adapted to particular soils and situations. A Committee was then appointed to carry into effect the suggestions contained in these communications. Several other letters were read on various subjects.

The first Quarterly Meeting was held on Friday, the 15th of March. The Marquis of Donegall, President, in the Chair.

Mr. Getty having read the Report of the Council, which detailed the proceedings of the General Meetings since the opening of the Session, in which it was stated that for the accommodation of as great a number of members as possible, it had been arranged to have two kinds of meetings—Monthly General Meetings at 8 o'clock in the evening, the hour which suited Members residing in Belfast, and Quarterly Meetings for the accommodation of country Members. A ballot was taken for new Members.

Mr. Porter, of Tandragee Castle, then read some statistical notices on the pawnbroking system in the county of Armagh. After which Dr. Andrews reported progress from the Committee on Medical Statistics, stating that "several enquiries had been instituted, particularly one as to the causes, progress, and mortality of typhus fever. Careful observations are also in progress at the hospitals to ascertain in a general manner the influence of external circumstances on the development of that important disease." The Rev. Dr. Reid then read a proclamation of Sir James Carroll, Lord Mayor of Dublin, A.D. 1613, regulating the prices of wages, &c., in that city. It is copied, it was mentioned, from the Lansdowne MSS. in the British Museum, and is not referred to by

any of the historians of Dublin. By this, labourers were to be paid, with meat and drink, 2*d.* per diem for the winter half-year, 3*d.* in summer; 5*d.* additional if not found in food. Carpenters, joiners, coopers, masons, tylers, plasterers—masters, 8*d.* per day; journeymen, 6*d.*; apprentices, 4*d.*: additional, if not found in food, 8*d.*, 6*d.*, 5*d.*, respectively. Gardeners seem to have been in demand, being paid the same as master-tradesmen. The prices were also fixed for paying, for hides, for tallow, from the butcher to the tallow-chandler, for candles, for tanning leather and for shoes, which seem to have been a favourite object for legislation. There were also several police regulations, which shew the state of society at the period. Dr. Reid mentioned that he was preparing some account of the length of incumbency of a large number of the Presbyterian Clergy of the North of Ireland, which he thought would be found interesting, as bearing on the question of the duration of life.

Mr. Bryce reported that the Queries on Education were nearly ready for distribution.

A copy of Sir R. A. Ferguson's Tables, as printed, was laid on the table.

MISCELLANEOUS.

An Abstract of the Number of Violent Deaths which occurred in the Borough of Liverpool during the Year 1838.

	Number.
Drowned	50
Run over by carts, &c., in the streets	12
Falling from buildings, &c.	6
Falling from rigging of shipping, &c., or into dry docks	16
Falling in the streets	6
By horses	5
Other accidents	18
Suicides, while under mental derangement, by poison	5
„ „ „ „ by other means	11
Excessive drinking	6
Apoplexy, or other causes of sudden death in which verdicts have been returned, "Died by the visitation of God"	68
Accidentally burned to death	*62
„ scalded „	11
„ overlain	7
„ poisoned	6
„ killed by machinery	6
„ „ fire-arms	1
„ „ goods falling	5
„ „ falling down stairs	4
„ „ drinking boiling water	1
„ „ falling into cellars	1
Died from the bite of mad dog	2
Choked while eating	2
Exposure to the inclemency of the weather and starvation	6
New-born infants found dead	31
Total	343

* Of these no fewer than 51 were children.

Progress of Education in France.—A correct idea may be formed of the progress made towards the general instruction of young people in France, by comparing the result of enquiries, made at different times, concerning the intellectual condition of the persons drawn to fill the ranks of the army. These are taken indiscriminately from all ranks of the people, and such an enquiry may therefore be held to exhibit very fairly the degree in which instruction has been imparted throughout the kingdom. Mons. A. M. Guerry, in his “*Essai sur la Statistique Morale de la France*,” published in 1833, has stated, as the result of enquiries made on this subject in the three years 1827 to 1829, that of the young men then drawn there were, on the average, 38 in 100 who were able to read and to write. From a report recently made by the Minister of War, it appears that in 1835 there were among 309,376 recruits, 150,035 who could read and write, being in the proportion of 48·50 per cent.; and that in 1836, the latest year comprised in the report, there were among 309,516 recruits, 153,290, or 49·53 per cent. who had received that amount of instruction.

Education in Switzerland.—The *Helvétie* publishes the following Statistical Return of the State of Public Instruction in the principal cantons in Switzerland. The population of the cantons in which the Reformed Educational System has been introduced, is 1,388,845; and the educational establishments comprise 3,977 masters and 274,295 pupils; being 1 pupil for every 5 inhabitants. These are divided as follows:

	Pupils.	Masters.		Pupils.	Masters.
Zurich	54,965	723	Argau	35,600	650
Berne	83,759	1,294	Geneva	5,922	112
Glarus	4,600	50	Thurgau	17,606	279
Basle. . . .	9,779	157	Vaud	39,217	312
Soleure	10,747	160	St. Gall (Catholic) .	19,000	240

The average number of “*élèves bénévoles*” in gymnasiums, middle schools (*écoles moyennes*), industrial, and secondary, is 8,729; ditto in superior schools, universities, lyceums, veterinary-schools, &c., is 1,325. The total sum allotted for education in the above cantons is 108,000*l.*, of which Zurich, Berne, Argau, St. Gall (Catholic part), and Vaud furnish 80,000*l.*

A List of Statistical Papers printed by the Houses of Parliament during the present Session of 1839.

HOUSE OF LORDS.

No.

- 9 Royal Burghs, Scotland—Revenues; Sums expended on Prisons
 - 19 Outrages, Ireland—Rewards offered from December 1837 to February 1839
 - 24 Wheat—Prices in years ending 1st September 1830 to 1833; also, in first week in each month during the same period
 - 29 Clergy Reserves, Upper Canada—Lands sold, Monies received, Rectories created, Lands and Salaries attached
 - 33 Wheat and Wheat Flour—Quantities entered for Consumption, Rates of Duty in each week, 1829-39
- Nos. 3, 5, 7, 11, 12, 13, 23, 30, 31, 32 and 35, correspond with, or are contained in Nos. 3, 66, 10, 38, 16, 40, 66, 53, 90, 100, and 108 respectively of the Papers printed by the House of Commons

HOUSE OF COMMONS.

No.

- 3 British North America—Lord Durham's Report, with Appendices
- 9 Newspaper Stamps—Number issued to each Paper, June to December, 1838
- 10 Municipal Boroughs—Receipts and Payments, 1837
- 16 Education—Papers respecting proposed Establishment of Board
- 21 Navy—Comparison of Estimate and Expenditure, 1837-38
- 22 Bank of England—Transactions with Government, 1838
- 25 Northern Lighthouses—Receipts and Payments, 1837
- 26 Monies in the Exchequer—Amount on 11th February, 1839
- 27 British Grain—Quantities shipped to and from each Port of United Kingdom, 1836-38
- 33 Army Estimates—For 1839-40
- 34 Navy Estimates—For 1839-40
- 35 Negro Education—In British Guiana and Trinidad; Latrobe's Report
- 37 Railway and Stage Carriages—Mileage and Composition Duties, 1836-38
- 38 Trade and Navigation—Annual Comparative Accounts, 1837-38
- 40 East Indies—Treaties with Runjeet Sing and Shah Shujah-ool-Moolk, &c.
- 42 Factories' Act—Reports of Inspectors of Factories on the operation of the Educational Clauses in said Act
- 43 Factories—Offences against the Act, 1838
- 46 {Wheat—Weekly Average Prices, 1834-38
{ Bonded Corn—Quantities abandoned and destroyed in London, 1837
- 47 Public Works, Ireland—Applications and Grants made
- 48 Court of Bankruptcy—Account of Fund and Salaries, 1838
- 49 Tithes' Commutation—Notices of Meetings, Agreements, and Apportionments, to 31st January, 1839
- 50 Victuallers and Beer Shops—Number Licensed and Convicted for Adulteration, 1835-37
- 52 National Vaccine Institution—Annual Report of Officers
- 53 Court of Session, Scotland—Number of Causes tried, &c., 1838
- 54 Upper Canada—Persons arrested for Insurrection or Treason
- 55 Church Establishment, Colonies—Number and Income of Ministers in each Colony
- 56 Pensions—Payable under 1 and 2 Vict., c. 95
- 65 Metropolitan Police—Annual Account of Receipts and Expenditure, 1838
- 66 Navy—Men and Ships employed at various periods, 1792-1838
- 67 Convicts—Reports of Superintendent of Hulks, 1838
- 68 Tithes' Commutation—Agreements confirmed by Commissioners, May 1838 to January 1839
- 69 Ordnance Estimates—For 1839-40
- 74 Grain—Imports from Ireland into Great Britain, 1800-38
- 75 Danish Claims—Report of Commissioners, February 1839
- 76 Transportation and Assignment of Convicts—Despatches, 1838
- 86 British Museum—Income and Expenditure, 1838
- 88 Railway Commission, Ireland—Expenses of
- 89 Soap—Quantities made, Imports, Exports, Drawbacks, Convictions, 1838
- 90 Grain—Quantities of Wheat Imported, Paid Duty, in Warehouse, Average Prices, Rates and Amount of Duty in each Month; Weekly and Aggregate Average Prices, Rates of Duty in each Week, 1828-38; Quantities of Foreign Imported from each country, 1828-37; Ships laden with Grain entered at Hull, London, and Newcastle, September to December, 1838
- 97 Liverpool and Holyhead Packets—Length of Passages, Sept. 1838 to Feb. 1839
- 98 Navy—Flag Officers on Full Pay since 1815
- 99 Malt—Quantities charged with Duty, 1810-38
- 100 East Indies—Treaties with Persia and Native Princes
- 101 Tithes' Commutation—Continuation of No. 49 for the Month of February
- 107 Jamaica and British Guiana—Papers on the Condition of the Labouring Classes
- 108 Tithes—Report of Commissioners
- 111 Milbank Penitentiary—Annual Report of Committee

PRESENTED BY COMMAND OF HER MAJESTY.

Religious Instruction, Scotland—Fifth, Sixth, Seventh, Eighth, and Ninth Reports of Commissioners

Factories—Reports of Inspectors. Second half Year of 1838

National Education, Ireland—Fifth Report of Commissioners, with Appendix

British Consuls in Foreign Countries—List of, with Amount of Salaries

Occupation of Algiers by the French—Papers relating to

Charities—Thirty-second Report of Commissioners

Tuscany and Italian States, Statistics of—Bowring's Report

Sickness and Mortality of Troops, Statistics of—Tulloch's Report

Imports of Foreign Wheat.—The total quantities of foreign wheat entered for consumption, from the passing of the Act 9 Geo. IV. c. 60 (July 1828), to the 31st December, 1838, was 6,788,880 quarters. Of this 5,088,946 quarters, or 75 per cent. were admitted at a duty not exceeding 6s. 8d., viz., 472,707 at 6s. 8d., 1,390,976 at 2s. 8d., and 3,225,263, at 1s. The remaining portion, amounting to 1,699,934 quarters, or 25 per cent., was charged with a duty above 6s. 8d.

Prices of Wheat in Malta.—The annual supplies of foreign wheat in Malta are chiefly imported from the Black Sea, and sometimes from the adjacent producing countries. The average annual price, exclusive of Egyptian wheat, during the ten years, from 1827 to 1836, was 32s. 1d. per salm, which is equal to 31s. 7d. per imperial quarter, as 100 salms are about equal to 98½ imperial quarters. The highest price was in 1828, viz., 38s. 2d. per salm; and the lowest in 1836, viz., 27s. 1d. The cost of selling, landing, and delivering in Malta, is about 1s. 4d. per salm.

Mortality at Birmingham and Manchester.—The Superintendent General of Births, Deaths, and Marriages in Birmingham, in his Report for the last half year of 1837, states, that from a comparison of the ages of persons who died in that town and in Manchester, one-fourth of the whole number of deaths takes place in Birmingham within the first year, while in Manchester, upwards of one-third die within the same period. In Birmingham three-sevenths, and in Manchester four-sevenths of the whole number of the deaths take place within the fifth year. In Birmingham, one-half the population attain their sixteenth year, while in Manchester, one-half the population die within the first three years. In Birmingham, twice as many people survive the age of seventy, as in an equal population in Manchester. The deaths from consumption are about equal in proportion to the population in the two towns, and comprise nearly one-fourth of the whole number.

Poor Rates, England and Wales.—The sum expended for the relief of the poor alone, in the year ended 25th March, 1838, was 4,123,604*l.*, which is 2 per cent. more than in the preceding year. The total amount of poor's rates expended, including law charges, county rates, &c., was 5,468,699*l.* There was during this year a very general decrease of expenditure in the agricultural counties, viz., in Lincoln 12 per cent., Shropshire 9, Hereford 8, Cambridge and Westmoreland, each 7, Kent and Monmouth 6, Norfolk, Suffolk, and the North Riding of Yorkshire, 5 per cent.; while in the county of Lancaster, the increase was 19 per cent., in Nottingham 18, in the West Riding of Yorkshire 12, and in Warwick 9 per cent.

Average Prices of Corn per Imperial Quarter in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week of the Month of February 1839.

	Weeks ended February								Average of the Month.	
	1st.		8th.		15th.		22nd.			
	s.	d.	s.	d.	s.	d.	s.	d.		
Wheat—Weekly Average .	77	0	74	1	71	6	71	10	73	7
,, Aggregate Average .	79	7	78	11	77	5	75	10	77	11
,, Duty on Foreign .	1	0	1	0	1	0	1	0	..	
Barley	41	2	40	4	38	6	37	10	39	5
Oats	26	3	25	8	35	2	24	5	25	4
Rye	48	11	43	5		6	41	10	45	11
Beans	40	8	39	9		8	38	7	39	5
Peas	42	2	41	0	47		39	2	40	5

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and remaining in Warehouse, in the Months ended 5th February and 5th March, 1839.

	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
February.						
Foreign . . .	147,934	150,010	9,318	56,263	63,084	25,172
Colonial . . .	2	2	173	329	329	4,599
March.						
Foreign . . .	210,419	211,637	12,696	80,328	78,357	27,345
Colonial . . .	..	..	173	1,200	1,200	4,594

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 5th February, and 5th March, 1839, and in the corresponding Quarters of the preceding Year.

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1833.	£.	£.	£.	£.	£.	£.
6th February	18,206,000	11,266,000	29,472,000	22,569,000	9,543,000	32,112,000
6th March . .	18,600,000	11,535,000	30,135,000	22,792,000	10,013,000	32,807,000
1839.						
5th February	13,252,000	10,269,000	23,521,000	23,157,000	8,919,000	31,076,000
5th March . .	18,298,000	9,950,000	24,248,000	22,767,000	8,106,000	30,873,000

NOTICE.

The next Number of the Journal will appear on the 1st of July.

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

JULY, 1839.

Report of a Committee of the Statistical Society of London, appointed to collect and enquire into Vital Statistics, upon the Sickness and Mortality among the Metropolitan Police Force.—May, 1839.

[*Read before the Statistical Society of London, on the 17th June, 1839.*]

AT the request of the Committee of "Vital Statistics," the Commissioners of the Metropolitan Police have been so liberal and obliging as to transmit, to the Statistical Society of London, most ample returns of the sickness and mortality experienced by the force under their charge, from its institution to the end of the year 1838. A careful investigation of these returns has afforded ground for the following remarks, to which have been appended four tables of classified results.

The Metropolitan Police Force was embodied in the year 1830, and had subsisted eight entire years at the end of the year 1838. The average strength of the force during the eight years was 3,314, the numbers being very nearly stationary throughout the whole period. This force is distributed in 17 divisions, distinguished by different letters of the alphabet, each being attached to a particular locality or district of London. The strength of each division averages 195 men: the smallest division is that of Whitehall (A), consisting of 116 men; the largest is that of Stepney (K), consisting of 290 men.

In order to maintain the average strength of 3,314 men, it is found necessary to recruit annually as many as 1,100 new members, the vacancies being created by 1,068, who are removed or retire from the force, and 32 who die, every year. The average duration of the service of each policeman is consequently three years. The average age at which the men enter is $28\frac{1}{2}$ years; about two-thirds enter between the ages of 20 to 31, and the remainder, with a very few exceptions, enter between the ages of 31 and 35 years. The few who have been admitted above that age were chiefly old officers who were attached to the police offices before the formation of the Metropolitan force. The proportional numbers retiring at different ages agree very nearly with the proportions admitted at the same ages; at least, such is the case, if the ascertained ages of the 1,029 men, who retired in the single year 1838, correspond with the ages of retirement in other years, which may be presumed to be most probable.

The average number of annual deaths which occurred among the Metropolitan Police during the eight years over which the observation extends was 32; the average strength during the same time having been 3,314 men, the annual rate of mortality was consequently .97 per cent., or very nearly 1 per cent. The average age of the men being

30 years, the mortality which they suffer is very moderate, and does not exceed that of the general population of England at the same age. The mortality of the general population of London at the same age is 30 per cent. greater than that just mentioned. Considering, however, the manner in which the police force is constituted, there exists no ground for presuming that the circumstances in which they are placed are more favourable to life than the circumstances of the general population of London. It must be borne in mind that the police force is a select body; the men are first chosen as being of sound and vigorous health, and the force is afterwards kept select by frequent discharges of men showing symptoms of impaired health or strength. Hence the health of the men entering the police force is above the average; and the tendency to fall towards the general average of health is counteracted by discharging all the less healthy members.

The amount of bodily labour required from each individual of the police force is very considerable; he has to walk 20 miles every day in going his rounds, besides being obliged to attend charges at the police offices, the labour of which may be estimated as equal to walking 5 miles more—in all 25 miles a day. During two months out of every three each police constable is on night-duty, for nine hours each night, from 9 o'clock in the evening to 6 o'clock in the morning. The labour thus demanded of the police is considered by many as excessive, and detrimental to their health; such may be the fact, although the amount of sickness suffered by the police force (consisting of select lives) does not sensibly differ from that which is found to exist among the general population of London at the same age.

The chief information contained in the present police returns relates to the sickness suffered by the members. In these returns are separately stated, for each division of the police force, the number of days of sickness suffered during each month of the eight years, from 1831 to 1838. The results deducible from these statements may aid in determining the relative healthiness of the districts to which the different divisions are attached, as well as the relative healthiness of the different months of the year.

According to the present returns, out of the 17 districts to which the several divisions are attached, the most healthy are those of Whitehall, Westminster, and Kensington; and the least healthy are those of Holborn, Finsbury, and Hampstead. Throughout the eight years observed, in the total police force, without distinction of divisions or districts, the average amount of sickness suffered by each man in one year was $10\frac{1}{2}$ days; hence the proportion of the total force constantly sick is equal to $2\frac{3}{4}$ per cent. In the least healthy districts above-mentioned, the average yearly sickness to each man was $12\frac{3}{4}$ days. In the three most healthy districts, there were only $6\frac{3}{4}$ days of sickness yearly to each man. The proportion of sickness in these three last-mentioned districts, is, however, so much lower than that of any other district, without any apparent cause, that it would be premature to conclude, without further information, that the salubrity of these districts was proportional to the low degree of sickness suffered by the police located therein. The apparently high salubrity of these districts might be supposed to be consequent on some peculiar circumstances in the constitution or service of the force resident

within their limits; but the Commissioners of Police expressly state that no such circumstances exist.

With regard to the healthiness of different months or seasons of the year, the present returns afford some valuable information. The maximum sickness is suffered in the month of January, the minimum sickness in the month of June or July; the maximum being to the minimum in the proportion of more than 3 to 2. The progressive increase or decrease of sickness from month to month is sufficiently regular when no epidemics supervene; the sickness generally increasing as the temperature of the month decreases. On viewing the table of sickness formed from the monthly aggregates of the four years 1835-38, we might be justified in drawing the following conclusion,—that in healthy years, not distinguished for epidemic disease, the sickness of the police force is at a minimum at the end of the month of June; and that the sickness increases uniformly throughout the six months, measured backwards or forwards from the last day of June. The disturbing effect of the usual epidemical diseases, on the above presumed law of sickness, is to elevate considerably the maximum for January, and to elevate in a minor degree, the relative sickness of the months of April and August.

It is doubtful whether the relative healthiness of the different months of the year, is the same among the general population as in the police force. The general population being less exposed to the influence of temperature, it appears probable that their sickness will not depend so much upon temperature as does the sickness of the police. From the experience of one of the largest London Benefit Societies during four years, it is found that the maximum quarterly sickness occurs in the three months, January, February, and March, and that the minimum occurs in the three months, May, June, and July. These results for London artisans do not differ materially from the results deduced from the present police returns, and we may safely draw the conclusion, that the relative sickness of any month for the general population is greatly dependent on the temperature of that month.

Since the above Report was presented to the Council the following communication, which strongly confirms the above theory, has been received from Mr. T. R. Edmonds, a Member of the Committee on Vital Statistics:—"The accompanying extract from the Mortality Returns for Glasgow in 1838, just published by Mr. Paul, shews that the mortality of each month, in that city, follows a law similar to that of the monthly sickness of the Police Force in London. It is at a maximum in January, and at a minimum in June or July, with a gradual increase and decrease between the two extreme periods:—

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
899	841	717	573	533	434	411	459	474	495	499	597	6,932

As the population of the city, at the same time, was estimated at 263,000, the annual rate of mortality was 2·64 per cent."

TABLE I.—Shewing the Sickness suffered by each of the 17 Divisions of the Metropolitan Police, during the Eight Years from 1831 to 1838; distinguishing the total Sickness of each Division into two periods of Four Years each, also distinguishing the Sickness of the month of January, and of the month of July, for each Division.

Letters.	District.	Average Strength.	Days of Sickness suffered during			No. of Sick days Yearly, to each Man, Average of the 8 Years.	Days of Sickness during 8 Years in the Months of		No. out of 100 Living, constantly sick in the Month of	
							January.	July.	January.	July.
			4 Years, 1831-34.	4 Years, 1835-38.	8 Years, 1831-38.					
A	Whitehall .	116	3,049	3,054	6,103	6.6	628	423	2.19	1.47
B	Westminster .	163	4,941	3,954	8,895	6.8	940	626	2.33	1.55
C	St. James .	184	8,046	6,656	14,702	10.0	1,571	1,037	3.45	2.28
D	Mary-le-bone .	161	7,582	7,748	15,330	11.9	1,535	1,061	3.84	2.65
E	Holborn .	163	10,247	6,429	16,676	12.8	1,835	1,392	4.54	3.44
F	Covent Garden .	159	7,639	6,888	14,527	11.4	1,706	1,328	4.33	3.37
G	Finsbury .	230	11,631	11,957	23,588	12.8	2,675	1,523	4.69	2.67
H	Whitechapel .	185	7,080	6,076	13,156	8.9	1,381	1,156	3.01	2.52
I	Stepney .	290	13,579	11,203	24,782	10.7	2,704	1,804	3.76	2.51
K	Lambeth .	186	9,129	5,511	14,640	9.8	1,576	960	3.42	2.08
L	Southwark .	184	8,600	7,489	16,089	10.9	1,869	989	4.10	2.17
M	Islington .	268	11,461	10,554	22,015	10.2	2,843	1,570	4.27	2.36
N	Camberwell .	238	9,435	9,701	19,136	10.1	2,272	1,345	3.86	2.28
P	Greenwich .	207	10,283	7,438	17,721	10.7	2,205	1,249	4.30	2.43
R	Hampstead .	219	9,964	11,637	21,601	12.3	2,517	1,422	4.64	2.62
S	Kensington .	180	5,075	4,650	9,725	6.8	1,129	723	2.53	1.62
T	Wandsworth .	181	7,150	6,555	13,705	9.5	1,635	930	3.64	2.07
V										
Total .		3,314	144,891	127,500	272,391	10.3	31,021	19,538	3.78	2.38

TABLE II.—Shewing the Number of Days of Sickness suffered by the Total Metropolitan Police Force in the Eight Years from 1831 to 1838, arranged according to the successive Months of the Year; also shewing the resulting Proportion of the Living constantly Sick during each Month of the Year.

Months.	Days of Sickness suffered in the same Months of			Average number constantly Sick out of 100 Living.	
	4 Years, 1831-34.	4 Years, 1835-38.	8 Years, 1831-38.	4 Years, 1835-38.	8 Years, 1831-38.
January	13,983	17,038	31,021	4.15	3.77
February	11,922	10,717	22,639	2.86	3.02
March	12,217	10,333	22,550	2.51	2.74
April	14,536	10,458	24,994	2.63	3.14
May	10,713	9,297	20,010	2.26	2.43
June	10,393	8,294	18,687	2.09	2.35
July	11,114	8,424	19,538	2.05	2.38
August	12,955	9,271	22,226	2.26	2.70
September	11,112	9,695	20,807	2.44	2.62
October	10,978	10,354	21,332	2.51	2.60
November	12,068	11,077	23,145	2.79	2.91
December	12,900	12,542	25,442	3.05	3.10
Total	144,891	127,500	272,391	2.63	2.81

TABLE III.—Shewing the Proportion admitted at each Age, of all, 14,548, who had entered the Metropolitan Police Force, from its Institution to 31st December, 1838; also shewing the proportion removed or retired at each Age, in the Year 1838, out of a total of 1,029 retired at all Ages.

Interval of Age.	Proportion Admitted from 1830 to 1838.	Proportion Removed or Retired in the Year 1838.
	1830 to 1838.	in the Year 1838.
Under 26	320	300
26 to 31	375	397
31 ,, 36	216	232
36 ,, 41	63	54
Above 41	26	17
Total*	1000	1000

TABLE IV.—Shewing the Number of Admissions, Removals, Retirements and Deaths; also the Number of Days of Sickness to each Man, during each Year from 1831 to 1838.

Year.	Admitted.	Removed and Retired.	Died.	Days of Sickness Suffered.	Days of Sickness to each Man.
1831	1,464	1,388	23	39,297	11.9
1832	959	919	33	35,353	10.7
1833	995	958	39	38,122	11.5
1834	1,033	986	35	32,114	9.7
1835	1,146	1,110	25	30,497	9.2
1836	1,056	1,019	28	29,834	9.0
1837	1,120	1,085	39	34,415	10.4
1838	1,095	1,029	34	32,754	9.9
Total	8,868	8,494	256†	272,391‡	10.3

* Average Age at admission, 28½ years.

† Average Annual Deaths during the 8 years, 0.97 per cent.

‡ Average number constantly Sick during 8 years, 2.81 per cent.

A Statistical Account of the Parish of Madron, containing the Borough of Penzance, in Cornwall. Digested from the Replies to the First Series of Questions circulated by the Statistical Society of London. By RICHARD EDMONDS, Esq., Jun., of Penzance.

THE town of Penzance is situated in the parish of Madron, which is one of the twelve parishes forming the western division of the Hundred of Penwith, in the county of Cornwall. Its position is on the north-western shore of Mount's Bay, on the southern coast of the county, and within ten miles of the Land's End.* The following is a tabular view of the number of statute acres in each of the twelve parishes above-mentioned, with the number of inhabitants, and of families, distinguishing those employed in agriculture, according to the census of 1831; from which some idea may be formed of the extent to which agriculture is pursued in the neighbourhood. The Scilly Islands are added, as Penzance is their only market-town:—

WESTERN DIVISION of the HUNDRED of PENWITH.				
PARISHES.	Statute Acres.	Population.	Families.	Families employed in Agriculture.
Madron	6810	2053	389	185
including Penzance		6563	1370	37
Paul	3500	4191	891	111
Gulval	3280	1467	303	90
Morvah	2660	377	68	27
Zennor	4640	811	153	89
Sancedred	4240	1669	223	146
Buryan	6970	1707	313	219
St. Just	7820	4667	869	109
Sennen	2350	689	128	66
St. Levan	2400	515	94	74
Ludgvan	4560	2322	428	136
Towednack	2850	737	136	33
Scilly Isles	5770	2465	565	164

The greatest length of the parish of Madron is rather more than four miles, and its greatest breadth nearly three miles. The southern bound-

* It is in the 50° 7' of N. latitude, and the 5° 30' of W. longitude, and is 280 miles S.W. from London.—Ed.

[About two years ago the Council of the "Statistical Society of London" put forth a series of questions, with the view of pointing out the kind of information which it would be desirable to procure relating to parochial and local Statistics, together with several forms in which the information might be most advantageously collected. These questions were necessarily numerous, and embraced a wide range of subjects, including population, industry, mechanical power, division and tenure of property, agriculture, condition of the labouring classes, prices, education, religion, &c. Each of these heads was placed in a separate section, in order that parties acquainted with one branch of Statistics might be enabled to furnish replies respecting it, without being, or feeling themselves, obliged to extend their inquiries further. The Council had but feeble hopes that they would receive replies to the whole series from any part of the country; still less, that any individual would be found willing to devote the necessary time and

dary of the parish, as well as of the town, is the sea. The northern, eastern, and western boundary-stones of the latter are distant from a horizontal cross placed at the junction of the three great streets—North-street, East-street, and West-street, respectively, 2,600, 3,152, and 2,728 feet.

Penzance is the port for all Mount's Bay. The nearest ports are Falmouth to the east, and St. Ives on the northern coast of Cornwall, there being none west of Penzance. The parish roads are very numerous and generally good. Although it is the market-town for a very large surrounding district, it is nearly two miles from any turnpike-road, and there are not any rail-roads, canals, nor navigable rivers in the vicinity.

Climate.—The climate of this district is remarkably mild and favourable to invalids. The following information is gathered from the Meteorological Journal, kept at Penzance by the late E. C. Giddy, Esq., while curator to the Royal Geological Society of Cornwall, and exhibits the maxima, minima, and media of the register thermometer, the total quantity of rain fallen, the total number of wet and dry days, and the prevailing winds in the nine years from 1821 to 1829:—

MONTHS.	Temperature.			Rain,* in Inches.	Wet Days.	Dry Days.	Prevailing Winds.
	Maximum.	Min. num.	Medium.				
	°	°	°				
January . .	55	19	43	37·410	134	145	W.
February . .	53	27	41	29·815	128	126	S.W.
March . .	66	32	47	32·045	128	151	W.
April . .	67	33	48	25·735	133	137	N.W.
May . .	72	38	54	25·775	111	168	N.E.
June . .	80	40	59	21·455	99	171	N.W.
July . .	84	49	61	30·905	130	149	W.
August . .	77	48	61	34·565	135	141	W.
September . .	72	40	58	33·925	112	158	S.W.
October . .	65	37	53·5	45·585	163	116	S.W.
November . .	60	32	49	41·785	165	105	N.W.
December . .	58	26	46	50·575	186	93	N.W.

* Mr. Edmonds remarks, "I am aware that the ordinary rain-guage is by no means to be relied on as an accurate measure of the rain which falls; but, as there was no other in this place during the above period, I have thought it best to insert the results."

labour to the task. In this, however, they are glad to own that they were mistaken. They have now an opportunity of laying before the Society, and through it before the public, a report upon the important town of Penzance, in Cornwall, and the parish in which it is situate, drawn up from replies furnished by Mr. R. Edmonds, jun., of that town; whose disinterested labours call for the warmest thanks of the Society, and whose success in collecting very valuable and interesting information, in a comparatively short space of time, offers much encouragement to other persons, who may be desirous of procuring a correct statistical account of their parish or neighbourhood. Mr. Edmonds has an intimate knowledge of Penzance, having resided in the town itself for twenty-five years, and being engaged there in the profession of solicitor. He has necessarily had recourse to many parties for information, and, among others, mentions his obligations to G. D. John, Esquire, Mr. W. Marrack, and several of the parochial authorities.]

Temperature, 1821-1829.

Maximum of the above 9 years	. .	84°, July 19, 1825.
Minimum	" "	19°, January 24, 1829.
Hottest month (mean temperature)		64°, July, 1826.
Coldest	" "	38°, February, 1827.
Hottest years	" "	53.5°, 1826 and 1828.
Coldest year	" "	50.5°, 1829.
Medium temperature of the 9 years		52°.
Medium of the annual maxima		75°.
"	" minima	26.5°.

The month of January, 1823, was remarkable for the great fall of snow, which began on the 14th, and continued to fall daily until the 23rd, and which did not wholly disappear until the 25th (twelve days). The minimum of the thermometer during this time was 27°, and the fluctuation of the temperature in the day-time, from 34° to 38°, prevented a great accumulation of the snow.

Rain, 1821-1829.

			Inches.	
The greatest fall of rain in one day	was	2.020	Oct. 4,	1821
" " in one month	"	9.500	Dec.	1821
" " in one year	"	57.455	. .	1823
The least " in one year	"	32.240	. .	1826
The average " per annum	"	45.5075		

Wet and Dry Days, 1821-1829.

The wettest year was 1824, and the number of wet days in that year were	225
The driest " 1826. " " dry days	251
The average number of wet days per annum was	180 4
" " dry days	184.7

N.B. "Wet days" include misty days and partial showers; and "dry days" are those on which no fall whatever took place.

Penzance is a corporate town. It is also the market-town for the whole of the western division of the hundred of Penwith. It supplies large quantities of vegetables, fish, pork, butter, and poultry, to distant markets; the last being chiefly sent to Falmouth, which is the station for the foreign packets, and the other kinds of produce being carried to the markets at Hayle, Camborne, Redruth, St. Day, Chasewater, St. Agnes, and Truro, distant respectively 9, 13, 18, 20, 23, 24, and 27 miles from Penzance, and situated in the great and populous mining district of Cornwall. Great quantities of vegetables are also sent to St. Ives, Helston, Penryn, and Falmouth, which are respectively distant 7, 13, 23, and 25 miles.

The parish of Paul, which adjoins the western part of Madron, contains the two fishing-towns of Newlyn and Moushole, with about 600 fishermen, according to the census of 1831. The parish of St. Just, also to the west, is principally a mining district.

Population.—There are no local records of the population of Madron or Penzance previous to the census of 1801. The only account of the town before that date is recorded in Dr. Davy's "Life of Sir Humphrey Davy"* in the following words, which give a fair representation of the

* Vol. I., page 8.

district at the time referred to:—"I have heard my mother relate, that when she was a girl (about the year 1760), there was only one cart in Penzance, and that if a carriage occasionally appeared in the streets, it attracted universal attention. Pack-horses then were in general use for conveying merchandize, and the prevailing manner of travelling was on horseback. . . . In the same town, where the population was about 2000 persons, there was only one carpet; the floors of rooms were sprinkled with sea-sand, and there was not a single silver fork. The only newspaper which then circulated in the west of England was the "Sherborne Mercury," and it was carried through the country, not by the post, but by a man on horseback specially employed in distributing it. . . . The lower class then was extremely ignorant, and all classes were very superstitious. Even the belief in witches maintained its ground, and there was almost an unbounded credulity respecting the supernatural and monstrous. Amongst the middle and higher classes there was little taste for literature, and still less for science. . . . Hunting, shooting, wrestling, cock-fighting, generally ending in drunkenness, were what they most delighted in. Smuggling was carried on to a great extent, and drunkenness and a low state of morals were naturally associated with it. . . . The tide of change and improvement began to flow about the period that my brother was born, 17th December, 1778.

The population, according to the four censuses taken by the Government, the correctness of which there is no reason to doubt, was as follows:—

	POPULATION.				INCREASE.		
	1801	1811	1821	1831	1811	1821	1831
Penzance . . .	3,382	4,022	5,224	6,563	640	1,202	1,339
Madron . . .	1,564	1,817	2,011	2,058	253	194	47
Total . .	4,946	5,839	7,235	8,621	893	1,396	1,386

From this it appears that while the population of Madron has been increasing between each decennial period in a diminishing ratio, that of Penzance has been increasing in an advancing ratio. There is reason to believe that since 1831 the population of Penzance has been augmented by about 2000 persons, and it continues to increase, while that of Madron continues almost stationary. In 1831, according to the census, the number of houses was, in—

	Inhabited.	Uninhabited.	Total.
Penzance . .	1264	90	1354
Madron . .	377	35	412
Total . .	1641	125	1766

At present the number in Penzance is very much greater. In 1831 there were 46 houses building in Penzance, and 5 in Madron; and in

July, 1838, there were at least 100 houses building in Penzance, besides those which were rebuilding, while in Madron there were very few houses building. The rental of the town, according to a valuation made at Midsummer, 1838, is about 27,000*l.* per annum, including the rents of the quay and market. The cause of the above increase in the population of Penzance is chiefly the increased numbers of the population of the surrounding parishes, of which Penzance is the market-town, and their augmented power of procuring the comforts and luxuries of life. Hence a great extension of the internal and maritime commerce of the town, which, as will be seen from a subsequent table, has increased more than tenfold within the last 100 years. The increased demand for the garden produce of the district to be sent to distant markets has also contributed to the present flourishing condition of the town, together with its reputation as a watering-place and as a winter residence for invalids. The mildness of the climate has already been pointed out. The number of invalids and other visitors to this place is annually increasing, and the attractions of the town and neighbourhood have induced many to become permanent residents.

The date of the earliest entry in the church-registers of Madron is the 20th May, 1577;* the first entry in the corporation-books of Penzance is of the year 1656. Mr. Edmonds has furnished a list of the baptisms, marriages, and burials in each year, from 1577 to 1837, taken from the parish registers, which, however, appear to be very incomplete until the commencement of the last century. Indeed, it is stated, that the original registers are so decayed, that it is often difficult to read them, and the last vicar of Madron therefore copied them. This table is too long for insertion, but the following extracts may be of interest. In 1596, the first year of which the record is complete, the baptisms were 33, marriages 10, and burials 24. The three following years, 1597-99, appear to have been marked by an unusual mortality, the number of burials having exceeded the average of the 10 subsequent years by nearly 80 per cent., viz., 46 in the former, and 26 in the latter period. In 1647 there were 133 burials, and in 1648, 82, of which numbers, 70 in the first, and 50 in the second year, were females. In the following year the number of burials was only 18. The average number of marriages in the four years, 1646-49, was nearly treble that of the ten following years, viz., 19:7; and the number of baptisms more than double, viz., 40:19. The years 1723, 1730, 1736, 1743, 1755, 1761, 1766-7, 1779-80, 1788-89, and 1792, exhibit an unusual number of deaths. In the present century, the years 1802, 1810-12, 1823, 1832, 1834, and 1837, are distinguished by the same excess of mortality, and in almost each case the number of marriages has greatly increased in the next year, and the baptisms in that which follows.

The subjoined extracts and calculations will show this fact, and furnish at the same time a sufficient view of the progress of population in the town and parish. Where a blank is left, the registers for the decennial period are incomplete, and an average cannot be given.

* The only remarkable entry in the registers is the following:—"20 Avril, 1715. There was a total eclipse of the sun between the hours of eight and nine in the morning; the stars were visible, which, with other circumstances, rendered it very dismal."

PERIODS.	Baptisms.		Marriages.	Burials.	
	Penzance.	Madron.		Penzance.	Madron.
Average of 10 years, from 1580 to 1589	..	..	10	31	..
" " 1590 " 1599	..	..	..	..	..
" " 1600 " 1609	33	..	10	26	..
" " 1610 " 1619	22	..	9	17	..
" " 1620 " 1629	17	..	7	16	..
" " 1630 " 1639	21	..	8	21	..
" " 1640 " 1649	..	..	..	..	..
" " 1650 " 1659	19	..	7	30	..
" " 1660 " 1669	..	..	..	..	..
" " 1670 " 1679	..	..	..	..	..
" " 1680 " 1689	20	..	..	..	..
" " 1690 " 1699	8	..	..	..	..
" " 1700 " 1709	59	..	14	39	..
" " 1710 " 1719	48	..	16	36	..
" " 1720 " 1729	78	..	20	62	..
" " 1730 " 1739	93	..	26	79	..
" " 1740 " 1749	83	..	27	70	..
" " 1750 " 1759	100	..	27	63	..
" " 1760 " 1769	90	..	27	81	..
" " 1770 " 1779	107	..	28	76	..
" " 1780 " 1789	113	..	33	89	..
" " 1790 " 1799	133	..	43	84	..
" " 1800 " 1809	154	..	42	94	..
" " 1810 " 1819	182	..	52	129	..
" " 1820 " 1829	214	..	62	127	..
Average of 8 years, from 1830 " 1837	265	..	81	171	..
Average of 1800-1	138	..	39	91	..
In the year 1802	142	..	34	133*	..
Average of 1803-4	161*	..	52*	98	..
Average of 1808-9	157	..	42	77	..
In the year 1810	164	..	35	111	..
" 1811	175	..	32	175*	..
" 1812	123	..	41	143*	..
" 1813†	160	..	61*	105	..
" 1814	221*	..	55*	100	..
" 1830	185	73	61	100	41
" 1831	170	91	72	100	45
" 1832	195	55	80	176*	43
" 1833	181	87	100*	97	52
" 1834	203*	79	76	163	58
" 1835	158	81	73	86	37
" 1836	180	98	93	108	66
" 1837	196	92	95	137	62

From the Report of the Penzance Public Dispensary and Humane Society for the year 1837, contained in the appendix to Mr. Edmonds's paper, it appears that, among the 174 deaths in the town and parish in

* The asterisks mark the years which exhibit an excess.

† From the year 1813, the Registers of Baptisms and Burials for Penzance have been kept separate from those for Madron.

1836, 93 were males and 81 females, and the ages of 173 were as follows:—

	No.		No.		No.
From 1 to 10 . .	79	From 40 to 50 . .	11	From 70 to 80 . .	21
„ 10 „ 20 . .	10	„ 50 „ 60 . .	14	„ 80 „ 90 . .	8
„ 20 „ 30 . .	10	„ 60 „ 70 . .	13	Above . . 100 . .	1
„ 30 „ 40 . .	6				

The same report contains some valuable tables relating to the population of the hundred of Penwith, as well as of the entire County.

The number of families, according to the census of 1831, was—

In Penzance .	1370	Individuals	6563 = 4·8 to each Family.
„ Madron .	389	„	2058 = 5·3 „
Total .	1759	Total	8621 = 4·9 „

The average number of children to a marriage in Penzance appears to be about 4·6. This result has been obtained in the following manner:—133 married women and widows living in 1837, taken indiscriminately from all classes, being above the age of 40, and not including any that had been married more than once, had given birth severally to the following number of children, omitting those which had been still-born:—

Women with no child . . .	10	Women with 7 children . . .	13
„ „ 1 child . . .	9	„ „ 8 „ . . .	12
„ „ 2 children . . .	18	„ „ 10 „ . . .	5
„ „ 3 „ . . .	15	„ „ 12 „ . . .	3
„ „ 4 „ . . .	19	„ „ 14 „ . . .	1
„ „ 5 „ . . .	16	„ „ 15 „ . . .	1
„ „ 6 „ . . .	11		

being 133 women, with 614 children, or 4·6 to each.

Among 114 marriages registered in the parish of Madron since July, 1837, the average age of the males was 25, and of the females 24 years. The age at which the greatest number of marriages took place was 23 among the males, and 21 among the females. The following table shews these particulars in detail:—

AGES.	PERSONS.		AGES.	PERSONS.		AGES.	PERSONS.	
	Males.	Females.		Males.	Females.		Males.	Females.
17	..	1	28	3	2	40	1	..
18	..	3	29	4	2	42	..	1
19	1	4	30	6	5	44	1	..
20	5	10	31	4	0	46	1	..
21	10	16	32	2	4	47	..	1
22	12	9	33	1	1	48	..	1
23	17	15	34	..	3	50	2	..
24	13	6*	35	2	2	59	1	..
25	6*	14	36	2	1	61	1	..
26	8	4	38	3	3	63	1	..
27	5	6	39	2	..			
Total							114	114

Out of 818 births registered between July, 1837, and November, 1838, in this district and the adjoining parishes of Paul and Gulval,

* It is a remarkable coincidence that at these ages, of 25 among men and 24 among women, (the average ages of their marriage,) not only are the numbers (6) the same, but the sums of the preceding numbers (58), and of the succeeding numbers (50), are also precisely the same in the columns of the two sexes.

there were only 19 illegitimate children: the proportion therefore of the latter to the legitimate births is as 1 to 43, or 2·32 per cent.

Trade.—The following particulars, furnished by the officers of Customs at Penzance, will serve to shew the present maritime commercial condition of the town and neighbourhood. The port of Penzance includes St. Michael's Mount, about 3 miles eastward by sea, Portleven, Newlyn, and Mousehole. By far the greatest part of the timber imported into Mount's Bay is landed at the Mount, which is in the immediate neighbourhood of some very extensive mines. Into Portleven also, which is by sea 11 miles east of Penzance, there is annually imported a considerable quantity of various commodities; as well as into Newlyn and Mousehole, which are fishing-towns in an adjoining parish west of Penzance. The amount of duties received on imports, and on goods taken out of bond in the year 1837, was 16,839*l.*, which is about the average of the receipts in each of the five preceding years. The duties on exports, consisting chiefly of tin, copper-ore, china-clay, leather, wool, and fish, have averaged during the six years, 1832-37, about 60*l.* per annum.

The total amount of tonnage which entered the port of Penzance and its outports during 1837 was 49,943, of which 5,179 tons were in the foreign, and 44,764 in the coasting trade. The former is only about one-half of the amount during each of the two preceding years, when the rage for mining speculations was at its height, and there was consequently an extraordinary importation of foreign timber. The coasting-trade was about 4000 tons more than in 1836, and about 9000 tons more than in 1835.

The amount of tonnage which sailed outwards during 1837 was 17,441, of which only 386 tons were in the foreign, and 17,055 in the coasting trade. The former is not a third of the amount during either of the two preceding years; the latter is about 2,600 tons more than in 1836, and 400 tons more than in 1835.

The annexed table of the rents received at various periods by the corporation of Penzance, from the farmers of the quay and market, will shew the degree of rapidity with which the commerce of the district has advanced during the last century.*

Years.	Quay.			Market.			Years.	Quay.		Market.
	£.	s.	d.	£.	s.	d.		£.	£.	
1656	25	5	0	67	0	0	1800	325		305
1660	22	0	0	76	0	0	1804	461		301
1690	40	0	0	103	0	0	1810	651		458
1720	50	0	0	100	0	0	1816	..		461
1730	92	0	0	123	0	0	1819	1110		492
1741	90	0	0	131	0	0	1820	980		536
1751	134	0	0	122	10	0	1830	1129		551
1760	108	0	0	115	10	0	1834	1551		482
1765	142	15	0	134	12	0	1837	1675		486
1782	262	0	0	206	0	0	1838	1811		678
1790	270	0	0	220	0	0				

The quay was enlarged in the interval between 1765 and 1782, and no entry of the rent received during that period is found in the Corpo-

* The above is only an abstract from the original table in Mr. Edmonds's paper, which is too long for insertion.

ration Book. Between 1816 and 1819 an Act of Parliament was obtained by the Corporation for power to impose a higher rate of quay-dues. In June, 1838, the new market-house in Penzance was opened; and in October the market was let for 678*l.*, which is considered less by 100*l.* to 200*l.* than it will yield in 1839.

The present pier* of Penzance, measured from the slip, is about 800 feet in length, with a depth of about 17 feet at the deepest part in ordinary spring-tides; and two wharfs are now building in the town, one by the Gas Company, under East-street, about 400 feet long, and the other by John Batten, Esq., near the Battery Rocks, about 200 feet in length. At the former, vessels will be able to discharge their cargoes as well as at the pier. There is also a dry dock at Penzance, large enough for ships of 800 tons.

The number of vessels and boats above 15 tons registered at the port of Penzance in 1837 was 83, and their tonnage was 4,469. Of this number, 38 are boats and 45 are vessels, all of which latter, except two, belong to the town of Penzance.

Industry.—This is purely an agricultural district: it does not contain any factory, with the exception of a small paper-manufactory recently recommenced, in which only six individuals are occasionally employed; nor are any manufactures carried on within the parish.

There are only two mines in which steam-engines are used; viz., the “Wherry Mine,” which has a steam-engine with a forty-inch cylinder, and was begun to be worked in June, 1837; and the “Tregavara Downs Mine,” which has a steam-engine with a thirty-six-inch cylinder, and was commenced at the end of the year 1836. In July, 1838, about 30 men were employed in the former, and 20 in the latter. There is a small undertaking in Mulfra Hill, called the “East Ding Dong Mine,” which recommenced in 1836; there is no steam-engine, and about 15 men are employed in the concern. There is also another small “work,” called “Wheal Fire,” which employs only two or three men.

The great “Ding Dong Mine,” employing from 200 to 300 men, is situate principally in the adjoining parish of Gulval, and all its engines are in that parish; so that it is not reckoned within this district. There are not many miners residing in Madron or Penzance; those even who are employed within the limits generally come from the adjoining parishes.

There are no windmills within the district. About a dozen horses are employed in turning machinery, consisting generally of whims used for drawing up the stones and earth broken in mining operations.

Agriculture.—Mount's Bay has long been distinguished for its early garden produce, by which all the neighbouring markets are supplied, especially during the spring of the year. The early potatoes in Penzance, or rather such of them as are most forward, attain the size of hens' eggs, and are drawn up for the market generally about the beginning of May, which is supposed by the inhabitants to be about six weeks earlier than in any other part of Cornwall or of England. In mild seasons they

* On the 6th May last a plan was submitted to the Corporation of Penzance for greatly enlarging the pier, which is now under the consideration of that body, and is likely to be adopted. It is proposed to form within the present pier, at the cost of 18,350*l.*, a floating-dock, or inner basin with gates, to contain 350 sail of vessels, including a space of 665,152 square feet, at a depth of water throughout of 17 or 18 feet. There would then be 192,988 square feet still left in the outer basin of the pier for another 100 sail of vessels.

have reached the same size, and been drawn up in the beginning of April; and in one instance, which occurred about half a dozen years ago, a gardener drew up and sold a whole crop of these potatoes, grown within Penzance, "by the 1st of April." The fields which produce the earliest crops are those lying along the shore or cliff between Penzance and Mousehole, the latter of which is about $2\frac{1}{2}$ miles south-west of the town; but the fields which produce the earliest crops one year may not do so the next, for they may be exposed to blighting winds from which other fields may be sheltered. The most favourable situation, however, which can be chosen, is close to the sea, with a southern aspect, and well sheltered on the north, and east, and west. The soil in which they are planted must be porous, in order to carry off quickly the frequent rains to which this part of Cornwall is subject. Although the potatoes are usually drawn and taken to market in the beginning of May, yet they do not attain their full size or best condition until about midsummer, when they are considered to be finer than any other in England.

At Penzance also brocoli and early cabbages (both of which are considered by the gardeners to be much larger and finer than those grown in any other part of the kingdom) may in most years be procured at any time between Christmas and Lady-Day. Turnips are generally fit for use here about the beginning of May, but, although very fine, are not thought to be equal to those grown at Marazion, situate on the eastern part of the bay, within three miles from Penzance.

Hitherto the early vegetables from Penzance and Mount's Bay have been principally consumed in Cornwall; but the facility of conveyance by steam-boats and rail-roads is now so great, that during the spring of 1838 a very considerable portion of them was sent to London and other distant markets, so that for the future Mount's Bay will most probably be the spring-garden, not merely of Cornwall, but of all England.

The area of the district, including the town, was stated in the return of the census of 1831, to be 6,810 statute acres. It is impossible to say what proportion of the land is under cultivation, without a survey for that purpose, which, it is supposed, will soon be made. An admeasurement and valuation of the parish, exclusive of Penzance, were made in the year 1826, by several of the parishioners best qualified for the task, and a copy of the document is in the hands of the parish-clerk. Out of 389 families residing in Madron in 1831, 195, or nearly one-half, were employed in agriculture. In the same year, the number of farmers employing labourers was 23 in Madron, and 3 in Penzance; the number of small farmers not employing labourers was 65 in Madron, and 14 in Penzance. There is no distinction of grass and arable land in this district, all, or nearly all, being occasionally broken-up for tillage. The orchards here are seldom planted exclusively with trees, the intervals being commonly used as garden-ground; hence the extent of orchards and gardens must be reckoned together: it is estimated at 160 acres. There is no coppice-wood. About 80 acres of plantation have been made within the last 20 years; 71 on the Trengwainton estate, of which 27 are planted with pinaster, 34 with elm, oak, ash, and birch, with a few beech and sycamore trees, and 10 with low firs, &c. The extent of waste land cannot be stated. The total length of parochial roads in the parish of Madron in 1838, was 20 miles of cart-road of the average breadth of 16 feet, and 22 miles of foot-way of the average breadth of

3 feet, amounting together to 42 miles. The total length of public roads in Penzance in the same year was very nearly 5 miles of cart-road of the average breadth of 22 feet, and rather more than 6 miles of foot-way of the average breadth of 5 feet, amounting together to 11 miles in the town, and to 53 miles in the whole district. From these data the extent of land occupied by roads in Madron is above $46\frac{3}{4}$ acres, in Penzance above $16\frac{3}{4}$ acres, and in the whole district above $63\frac{1}{2}$ acres. The amount of highway-rates collected in Madron during the last 10 years is as follows:—

	£.	s.	d.		£.	s.	d.		£.	s.	d.
1828	279	7	1 $\frac{1}{2}$	1833	80	13	6		301	7	2
1829	303	6	1	1834	82	6	10	} including for statute labour	308	9	6
1830	280	7	0	1835	38	12	0		281	17	6
1831	448	3	11	1836	34	3	9		175	8	0
1832	347	18	1 $\frac{1}{2}$	1837.					428	9	6

The highway-rates collected in Penzance for the last 10 years cannot be stated, as no regular account of them was kept until the year 1836.

There are no royal forests in this district. There is no copyhold, and it does not appear from old deeds that any part of it ever was copyhold. The following manors are in, though not confined to, the district, *viz.*, Connerton, Boswednan, Alverton, Penzance and Mousehole, Trengwainton, Lanyon, Enel-Gulval, Penzance and St. Just. No enumeration of landowners and occupiers, nor of the extent of land occupied by either, is known to exist. The number of proprietors of land of the yearly rent (not parochial value) of 50*l.* and upwards, not including houses, was about 57 in the year 1837, of whom about 30 reside out of the district.

The value of land, in purchasing, is usually estimated here at thirty times its annual value. According to this rule, therefore, the value of arable land within a mile of the centre of Penzance, the average rental of which is 7*l.* per acre, would amount to about 210*l.* per statute acre, and the remainder of the arable land in Madron, which is situated principally on high and exposed ground, the average rental of which is 2*l.* 10*s.* per acre, would amount to about 75*l.* The following information, taken from written documents relating to sales of land in the district, will afford a further criterion upon this subject.

In November, 1835, Trengwainton and other adjoining estates in this parish, the property of the late Sir Rose Price, Bart., were sold to H. L. Stephens, Esq., for 28,500*l.* The total number of statute acres was 773; it therefore averaged only 37*l.* per acre: but 519 of these acres have never been cultivated, being used as a rabbit-warren and for pasturing sheep; and of the remaining 254 there are 71 acres of plantation, leaving only 183 of arable land. The buildings on the estate were not valued at more than 2,000*l.* The nearest part of the land is not within a mile of the town.

In August 1837, several fields in the Hea estate, within a mile of the centre of the town, were sold for the following sums: 7 customary acres* were sold for 1,210*l.*, 1 $\frac{3}{4}$ for 380*l.*, 2 $\frac{1}{2}$ for 450*l.*, 3 for 450*l.*, and 8 for 1,210*l.*; total 22 $\frac{1}{4}$ for 3,730*l.*, or 167*l.* per acre.

* A customary acre bears to the statute acre the proportion of 36 to 30 $\frac{1}{4}$; a customary perch being 6 yards square, while the statute perch is the square of 5 $\frac{1}{2}$ yards.

Land in the town, when sold in fee simple, in small plots for building, averages at the rate of about 1,500*l.* per customary acre.

The great increase which has taken place in the value of land will be shewn by the following facts: a part of Lariggan, now an orchard and garden, on the borders of Penzance, containing about $2\frac{1}{2}$ statute acres, was sold in 1719 for 36*l.*, upon a lease for 999 years, subject to an annual rent of 4*s.*, and was sold again in 1833 for 560*l.*, for the remainder of the period, and subject to the same rent. A cottage worth about 100*l.* had been in the meantime erected upon it. Thus, in 114 years, the land (exclusive of the cottage) had increased more than twelve times in value. Another part of Lariggan, consisting of fields called the Weeths, measuring nearly 5 statute acres, was sold in 1781 for 483*l.*, and was again sold in 1824 for 970*l.*; but if these fields had been sold by auction they would probably have fetched 1,100*l.*; having thus, in the interval of 43 years, more than doubled in value.

The rent of land is very high in this district. It appears from the best sources of information, that cultivable land, within a mile from the centre of Penzance, lets, on an average, for 7*l.* per statute acre; the highest rent reaching to about 11*l.*, and the lowest being 3*l.* 10*s.* The remainder of the district, which is mostly on high and exposed ground, averages about 2*l.* 10*s.* per acre; some being let as low as 15*s.* per acre. Some of the land in the town is so rich that when it is let for the tillage of potatoes or vegetables, after having lain fallow a few years, it fetches 20*l.* per customary acre for the first year, and 16*l.* for the second. About 40 years ago the land which now lets for 5*l.* an acre was let for only 2*l.*, although it was probably in as good condition then as at present. Treneere Farm, for example, which, in 1796, was let for 60*l.*, now lets for 150*l.*; and Trannack Farm, which, about 40 years ago, was let for 40*l.*, now lets for 100*l.* Five customary acres of arable land in Lariggan, on the borders of the town, were let in 1781 for 13*l.* 13*s.*, and are now let for 30*l.* The cause of this advance is the increased population, wealth, and trade of Penzance. It must, however, be noticed, that about 25 years ago the rents of the land, within a mile of the town, appear to have been about a fifth higher than at present; but these high rents were not of long continuance, and were owing to the long-protracted war.

The usual mode of letting in this district is by lease, for 7, 14, or 21 years. The acre mentioned in the leases is usually understood to be the customary acre. The conditions usually inserted are as follows: "Not to break any land under three years' lay. To carry 10 butt-loads of good town or fish dung, and 10 butt-loads of sea-sand, (which are afterwards to be mixed up with the necessary quantity of earth) for every acre broken up for tillage; and upon such manuring to take only two crops of grain successively year after year. Not to break up in the last three years of the term more than one third of the arable land. To sow eight pounds of clover-seed, and 12 gallons of evar-grass seed, for every acre sown with grain, or tilled for the last crop before the end of the term. To thrash on the premises all the grain which shall grow thereon, and to use and spread the straw and reed (except the wheaten and oaten reed) on the land, with all dung, soil, ashes, &c., arising or made on the premises. Not to cut any furze of less than four

years' growth during the last year of the term. To allow the landlord to enter the last year of the term to prepare the usual quantity of land that might then come in the course of tillage for wheat." The above are the conditions inserted in the leases of a large proprietor of lands within two miles of Penzance. The following are extracted from the leases of another large landed proprietor in the district. "To spread the usual quantity of good sea-sand, and dung, over every part to be sown with grain or seed; and upon such manure to take only two successive crops of grain; and half of the last year's tillage to be barley or oats. Not to take more than one crop of hay in any one year, nor two years following, without dressing the same as for wheat. Not to have in tillage more than one-third of the arable land. To thrash all the grain on the land, and to use all the straw and reed, except the wheaten reed, with the dung, ashes, &c., made on the premises for manuring the same. Not to cut any furze in an improper season, nor under four years' growth, nor more than one-fifth part thereof in any one year." The following conditions are inserted in most of the leases in this district: "Not to take more than one crop of hay after any tillage or laying-out to pasture. Not to take, after each breaking-up, more than three crops (including those of potatoes and turnips) and the last of these crops to be barley or oats. To sow with the last spring crop eight gallons of evar-grass seeds, four pounds of red clover-seeds, and two pounds of white clover-seeds, on every acre."

With respect to the usual mode of ploughing in this district, the following is the substance of the information upon the subject gathered from different farmers. The common plough is generally used here. In ploughing lay-ground for wheat there are three different processes. 1st, that of "combing," in which a thin surface of the field is turned up in ridges, and falls down on unturned ridges of equal breadth. The two surfaces of grass which are thereby brought into contact are left in this state until the grass is decayed. In some farms, however, it has recently been the practice to leave the "stools," or unturned ridges, only one-third of the breadth of those which are turned over upon them. 2nd, that of "thwarting," or, as it is pronounced, "thirting," which only differs from "combing" in being performed in an oblique direction to that process, and the furrows being generally somewhat deeper. After each of these processes the harrow and roller are used; the weeds are then gathered, and either thrown into a pile to rot for future manure, or else, as is frequent, burnt in small heaps on the field, and the ashes scattered over it. The 3rd process is "ploughing clean," or entirely ploughing without leaving any intervals, and this is generally in the direction of the combing. Immediately before the third process, the manure is spread over the field, and is thus ploughed in with the soil. The "ploughing clean" is usually to the depth of nearly four inches, whereas the "combing" or "thirting" seldom exceeds one inch and three quarters. The field is afterwards again harrowed, then sown with wheat, then once more harrowed, and left thus until the wheat has sprung up, when the roller is again drawn over it. When the "tormentor" is used in this district the ground is first combed very shallow, and then the harrow and "tormentor" are alternately used until the ground is cleaned. After this the land is ploughed clean. In the second year, when preparing for the

tillage of barley or oats, the ground, of course, does not require so much labour; and only so much of the foregoing processes as the various conditions of the fields may require are resorted to. A team of two good horses ploughs clean on an average about one statute acre per diem.

The different kinds of manure usually employed in this neighbourhood are sea-weed, sand, stable-dung, ashes, and fish-dung. The quantities used vary so much according to the condition of the land and other circumstances, that it is impossible to state with any degree of accuracy what quantity is applied to the acre. In one of the conditions of leases previously quoted, it is stipulated that 10 butt-loads of good town or fish dung, and 10 butt-loads of sea-sand (to be mixed with the necessary quantity of earth) shall be carried for every acre broken up for tillage. The manures are all to be procured within the district, with the exception of the fish-dung, which may be obtained within half a mile of it. The prices, as gathered from gardeners and farmers, are as follows:—

Sand to be had on the beach in any quantities for nothing.			
Sea-weed	ditto	ditto	after a rough sea.
Stable-dung, about		3s.	per butt-load drawn by 2 horses.
Ashes		2s.	„ „
Fish-dung (when entirely fish) about 20s.		„	„

Calcareous sand is obtained about nine miles west of Penzance, at Porthcurnow Cove, and land in this district is stated, on the authority of Mr. W. Marrack, to be much more improved by the Porthcurnow sand than it is by the mixed argillaceous and siliceous sand found on Penzance beach; while, on the other hand, the land near Porthcurnow is better when manured with the Penzance sand than with that from its own neighbourhood. It is difficult to say how often each kind of manure is generally used, as the farmers treat their land in numerous different ways; some manuring it every year, and others only once in five or six years.

It is usual, as has been shewn in the conditions of leases, to have only one-third part of the arable land in tillage at one time. The old course of crops used to be wheat in the first year, and barley in the second; but during the last few years the farmers, as far as they have wanted potatoes or turnips, have generally grown them the first year, wheat the second, and barley or oats the third year.

Drainage is generally effected in this district by two rows of stones, a few inches high, covered over with other stones, and without any bottom except the earth through which the channel is cut. Draining-pipes are very rarely employed. The tiles and bricks used in this neighbourhood are generally imported from Bridgewater, as no good clay for making them can be obtained here. Some bricks, however, are made in small quantities, and sold at 4s. 3d. per 100. The “crease,” which is a sort of tile for covering the top of a slated roof where the two sides of the roof meet, is often made here, and sells for about 3½d. each, when 1½ foot in length. Flooring-tiles made here sell for 4d. each, when of a foot square. The less portable articles of coarse earthenware, such as chimney-pots, water-pitchers, flower-pots, &c., are also made here.

No account can be furnished of the number of horses, cattle, or sheep, in the parish. Cattle and sheep leys are stated to be rare, as the owners of stock generally have fields of their own; but persons who keep

horses in fields in or near the town pay about 7s. per week for the grass for a horse—a customary acre being the usual allotment to each horse. No cheese is made in the district in any quantity worth noticing. The average price of butter during 1837 was about 1s. The produce of a good cow is about one pound of butter per diem, throughout the 40 weeks during which she is milked. This, however, is beyond the produce of an average or ordinary cow.

There are two Societies in this district for the encouragement of agriculture and horticulture: viz., “*The West Penwith Agricultural Society*,” established in 1811, which has an annual exhibition with prizes, for the promotion of agriculture and the improvement of the various kinds of cattle, &c.; and “*The Western District Cottagers’ Gardening Society*,” established in 1836, which has two exhibitions with prizes every year.

Markets and Prices.—The following statements contain very complete information as to the average prices of the principal articles of food and clothing, at different periods. The first refers to the year 1837, and was obtained from persons dealing very extensively in the articles. The quality of the several things is that which is generally used by the labouring classes, unless expressly stated otherwise. The wholesale prices are distinguished from those of retail:—

	Wholesale.			Retail.				Wholesale.			Retail.		
	s.	d.	s.	d.	s.	d.		s.	d.	s.	d.	s.	d.
Salt Beef (not sold here)	—	—	—	—			Coffee lb.	1	9	2	0		
Fresh Beef, the best, lb.	—	0	6				Sugar, brown . . ,	0	7 $\frac{1}{2}$	0	8		
Mutton ,	—	0	6				— white . . . ,	0	9	0	10		
Lamb ,	—	0	6				Cocoa ,	—		1	0		
Veal ,	—	0	6				Salt 3 lbs.	—		0	1		
Pork, salt . . . lb.	0	6	0	6 $\frac{1}{2}$			Pepper lb.	1	0	—			
— fresh . . . ,	0	4 $\frac{3}{4}$	0	5 $\frac{1}{2}$			— oz.	—		0	1		
Bacon ,	0	7 $\frac{3}{4}$	0	9			Salt fish, the cheapest, cwt.	16	0	—			
Butter, salt . . ,	0	8 $\frac{1}{2}$	0	9			— , lb.	—	0	2 $\frac{1}{2}$			
— fresh . . . ,	—	1	0				Fresh fish, ,	—		0	1		
Milk quart	—	0	2 $\frac{1}{2}$				Mackarel ,	120	12	0	—		
Cheese lb.	0	7 $\frac{1}{2}$	0	9			Pilchards ,	—	1	6	—		
Eggs doz.	—	0	8				Beer 18 galls.	14	0	—			
Potatoes Cornish bush.*	7	0	—				— quart	—		0	4		
— cwt.	—	0	5				Porter 18 galls.	15	0	—			
Bread, wheaten, best, 4 lbs.	—	0	10				— quart	—		0	5		
Ditto, , second, ,	—	0	8				Malt quarter	54	0	—			
Flour, wheaten, best ,	0	2	0	2 $\frac{1}{4}$			Hops lb.	—		1	6		
Ditto, , second, sack	44	0	—				Shoes, stout men’s, pair†	—		7	6		
— , , lb.	—	0	2				— women’s, ,	—		4	6		
Oatmeal . . . ,	—	0	2 $\frac{1}{2}$				Shirt, men’s . . each	—		2	6		
Barley-meal . . ,	0	1 $\frac{1}{2}$	0	1 $\frac{1}{4}$			Smock-frock . . ,	—		3	6		
Coals cwt.	—	1	0				Flannel yard	—		1	0		
Firewood, furze, 100 faggots	7	0	—				Cloth for best coats, ,	—		13	0		
Soap, common . . lb.	0	6	0	6 $\frac{1}{2}$			Cotton for gowns . ,	—		0	5		
Tallow candles . . doz.	5	6	—				$\frac{3}{4}$ -Fustian . . . ,	—		1	7		
— lb.	—	0	6				Velveteen (not used here)	—		—			
Tea ,	5	0	—				$\frac{1}{2}$ -Ell corduroy . . yard	—		1	3		
— oz.	—	0	4										

The average or usual prices of agricultural stock and implements are as follows:—

	£.	s.	d.
A good heavy cart-horse.	20	0	0
, , light ditto.	15	0	0

* For the capacity of a Cornish bushel see note at p. 214.

† The prices of this and the following articles were obtained in September, 1838.

This distinction is made because farmers have recently used lighter carts, which, from the great improvements in the roads in the district and neighbourhood, answer better than the heavy carts.

	£.	s.	d.
A good-milch cow at her prime	11	0	0
A breeding-sow, according to size and breed, from 1 <i>l.</i> 1 <i>s.</i> to	4	4	0
A good donkey	1	15	0
A farmer's heavy cart, quite new	8	10	0
„ „ light ditto „ „	6	10	0
A farmer's waggon, whether heavy or light, is about double the price of a cart; but waggons are rarely used on the farms here.			
A plough, including the share and coulter	1	1	0
A harrow, heavy	1	0	0
„ „ light	0	10	0

But heavier and more expensive harrows are required in the adjoining parishes.

The following extracts from the account-books of the Corporation of Penzance, shew the prices of various articles, at different periods, during the last two centuries:—

A.D.		£.	s.	d.
1656	Three feet of crease* for the market-house, at 3 <i>d.</i> per foot	0	0	9
	A 15-lb. weight for the alarm, at 2 <i>d.</i>	0	2	6
	A lock for the door	0	0	10
	A pound of fine powder	0	1	4
1657	Paid for land-leave at 4 <i>d.</i> per load of stones.	0	1	8
	Ditto for 4lbs. of powder, spent by the townsmen at the proclamation of His Highness the Lord Protector, at 1 <i>s.</i> 6 <i>d.</i>	0	6	0
	120 board-nails at 20 <i>d.</i>	0	2	0
	One bundle of laths	0	1	6
	14 feet of glass at 8 <i>d.</i>	0	9	4
1659	23½ lbs. of powder at 1 <i>s.</i>	1	3	0
	46 lbs. of pistol-powder at 1 <i>s.</i> 6 <i>d.</i>	3	0	0
Jan. 4th	Paid at the Tavern, for 12 ordinaries, and wine and beer at our meeting, to draw the remonstrance to the Protector	0	17	6
1661	A lock for the market-house door.	0	2	0
	Two hogsheds of lime.	0	10	0
	Ordinaries for 60 men, who bore arms in the town at the Coronation at 1 <i>s.</i>	3	0	0
	Paid for a hogshhead of wine for that day.	3	0	0
1662	To Mr. Mullius for the town-gallon, and an attestation from the Mayor of Winchester, under hand and seal	1	0	0
	To Mr. Buller's clerk for drawing the lease of the alms-house	0	15	0
1663	A gallon of burnt sack given to Mr. Buller	0	10	0
	A pottle of ditto to the Recorder	0	5	0
	A hogshhead of lime.	0	5	6
	38 feet of glass for the coinage hall, at 7 <i>d.</i>	1	2	0
1666	Stocking 3 muskets at 3 <i>s.</i>	0	9	0
1668	6 lbs. of lead at 3 <i>d.</i>	0	1	6
1669	60 feet of glass at 8 <i>d.</i>	2	0	0
1671	3 bundles of reed at 1 <i>d.</i>	0	0	3
	1000 laths	1	3	4
1672	4 bottles of wine at 1 <i>s.</i>	0	4	0
	One quarter and 14 lbs. of rope for the tower, at 5 <i>d.</i> per lb.	0	4	0
	4 tons of lime at 2 <i>s.</i>	4	16	0
	New shovel	0	2	0
	3 barrows	0	9	0

* A sort of tile covering, the top of a slated roof, where the angles of the latter meet.

		£.	s.	d.
1672	2½ tons of fir timber at 40s.	5	0	0
	32,000 helling-stones (slates) per 1000	0	8	6
	450 feet of Irish plank per foot	0	1	4
1677	To the masons, 4 cider hogsheads at 6s.	1	4	0
1703	8000 helling-stones, with charges of landing, 12s.	4	16	0
	33 feet of crease at 3d.	0	8	3
	6 bushels of hair at 6d.	0	3	0
1707	1 Cornish bushel* of oats.	0	2	6
	2 ditto of barley at 6s.	0	12	0
1723	383 feet of 3-inch oak plank, for lining the piles	8	11	6
	14 yards of blue shalloon for lining the Mayor's seat	0	18	8
1724	2 bushels of lime	0	2	0
1726	3,400 bricks at 13s. 4d.	2	5	4
	2000 helling-stones	1	1	9
1727	Hogshead of cider	1	5	0
1734	200 board-nails at 10d.	0	1	8
	100 hatch-ditto.	0	0	10
1736	Shovel and hilt for scavengers.	0	2	6
1743	Paid for fire-engine.	8	7	6
1745	Received of John Borlase, Esq., being the purchase-money for the perpetual advowson of Madron, Penzance, and Morvah.	800	0	0
1758	Hogshead of ale for the populace.	2	2	0

The following prices, distinguishing the lowest, average or most common, and the highest, are extracted partly from a book of expenses kept by a clergyman who resided within about three miles of Penzance, which was his only market-town; and partly from his house-keeper's account-books, settled by himself at frequent intervals from 1746 to 1770. The few articles marked with an asterisk are extracted from the churchwarden's books of Madron during the same period:—

Prices, from 1746 to 1770.

ARTICLES.	Lowest.	Average, or most common.	Highest.	ARTICLES.	Lowest.	Average, or most common.	Highest.
<i>Liquors.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>Food.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Brandy, English, gal.	4 0	4 0	4 0	Beef . . . lb.	0 1½	0 3	0 4½
„ French „	..	6 0	..	Mutton . . „	0 2½	0 3½	0 4½
„ Cognac „	..	4 0	..	Pork . . . „	0 2	0 2½	0 3½
Rum . . . „	5 6	7 0	7 0	Veal . . . „	0 2	0 2	0 3½
Geneva . . . „	4 0	..	5 0	Fowls . . . each	0 2¾	0 3½	0 8
Arrack . . . „	..	7 6	..	Geese . . . „	1 0	1 0	1 0
White Port . . „	..	4 0	..	Hares . . . „	1 0	1 0	1 0
Red Port . . . „	4 0	5 4	5 4	Turkies . . . „	2 0	2 3	2 6
Claret . . . „	3 0	3 0	3 0	Ducks . . . „	0 4	0 4	0 9
Mountain Wine „	5 0	5 6	6 0	Rabbits . . . „	0 3	0 5	0 6
Lisbon . . . „	3 3	3 5	3 6	Pigeons . . . „	0 3	0 3	0 3
Sherry . . . „	..	3 0	..	Butter . lb. of 18 oz.	0 4½	0 6	0 11½
Ale „	1 0	1 0	1 0	Cream . . . pint	0 3	0 4	0 5
Beer „	1 4	1 4	1 4	Tripe . . . each	1 0	..	1 6
Cider „	0 6	1 4	1 4	Lobsters . . . „	0 1½	0 2	0 4
Vinegar . . . „	..	1 6	..	Oysters . . . 100	0 8	0 8	0 8

* A Cornish bushel, which is commonly used in this district, equals 3 Winchester bushels. The pound of butter sold at Penzance market, until the statute of 5 Geo. 4. consisted of 18 oz., but now it does not exceed 16 oz.

ARTICLES.	Lowest.	Average, or most common.	Highest.	ARTICLES.	Lowest.	Average, or most common.	Highest.
<i>Food.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>Sundries.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Bullock's heart, each	1 0	1 0	1 0	Women's kid gloves } pair	1 10	..	2 0
Turbot "	..	0 6	..	Tanned leather } gloves " "	..	1 3	..
Hake "	0 1 $\frac{1}{2}$	..	0 2	Hat, gentlemen's .	13 6	14 0	15 0
Dory "	0 2	..	0 2	Shoes, women's, pair	2 6	2 6	..
Ling "	0 2	1 0	2 0	Pattens "	..	0 10	..
Soles pair	..	0 4 $\frac{1}{2}$	..	Reap-hook . . . .	..	1 0	..
Cod each	0 3 $\frac{1}{2}$	0 6	1 0	Warming-pan . . .	..	10 6	..
Pollock "	0 2	0 4	0 6	Gridiron . . . .	..	2 6	..
Shrimps . . . quart	..	0 8	..	Cow and calf . . .	..	£5.	..
Potatoes, Corn. bush.	† 4 0	6 0	8 0	Set of horse-shoes.	..	1 8	..
" gall.	0 2	0 4	0 6	Pick and handle* .	..	3 6	..
Wheat, Corn. bush.	10 0	12 0	19 0	Shovel and hilt* .	..	3 0	..
Barley "	5 0	6 6	8 0	Broom	0 1	..	0 1
Oats "	3 0	4 0	6 0	Holland yd.	..	3 6	..
Wheat-flour . . lb.	0 2	0 2 $\frac{1}{2}$	0 3	Worsted oz.	0 2 $\frac{1}{2}$	..	0 2 $\frac{3}{4}$
" gall.	0 4 $\frac{1}{2}$	0 6	0 8 $\frac{1}{2}$	Thread . . . . .	..	0 4	..
Oatmeal "	0 8	1 0	1 4	Worsted stock- } pair	..	4 0	..
<i>Groceries.</i>				Thread stockings ,	2 8	..	3 0
Candles, common, lb.	0 4 $\frac{3}{4}$	0 6 $\frac{1}{2}$	0 11	Cotton lb.	..	1 0	..
" mould "	0 7	0 8	0 8 $\frac{1}{2}$	Needles "	..	6 0	..
Sugar, loaf . . .	0 8	0 11	1 0	Pins oz.	..	0 5	..
Soap, com- } doz. lbs.	4 6	6 6	7 0	Blanketing . . yd.	..	1 3	..
mon }				(canvas, sheeting ,	..	1 9	..
Soap, Castile . .	6 6	7 0	7 9	Muslin . . . . .	..	4 3	..
Sago lb.	..	0 3	..	Camlet . . . . .	..	1 0	..
Rice "	0 2 $\frac{1}{2}$	..	0 3	Dowlas . . . . .	..	1 0	..
Cheese "	0 3	0 4	0 4 $\frac{1}{2}$	Hops lb.	0 11	1 2	1 2
Tobacco "	..	3 6	..	White-lead . . . .	..	0 4	..
Raisins "	0 3 $\frac{1}{2}$	0 4 $\frac{1}{2}$	0 5	Hay truss	1 8	1 9	1 10 $\frac{1}{2}$
Currants "	0 6	0 7	0 7 $\frac{1}{2}$	" cwt.	..	2 6	..
Prunes "	..	0 4	..	Coals bushel	0 7 $\frac{1}{2}$	0 10	0 11
Figs "	0 5	..	0 6	Bricks 100	2 1 $\frac{1}{2}$	2 2	2 2
Coffee "	0 9	0 11	1 0	Oak* foot	..	1 10	..
Chocolate . . . .	..	1 6	..	Mahogany*	0 8 $\frac{1}{2}$	..	0 10
Tea, green	6 0	7 0	12 0	Lime* bushel	..	1 0	..
" bohea . .	3 10	5 6	7 6	Crease* foot	0 2 $\frac{1}{2}$	0 2 $\frac{1}{2}$	0 2 $\frac{1}{2}$
" hyson . .	..	11 0	..	Helling-stones* 1000	9 0	..	10 0
Pepper "	1 6	2 4	2 4	Pins for slates . .	0 5	..	0 6
Cayenne oz.	..	2 0	..	Hair bushel	0 6	..	0 6
Salt lb.	0 1	0 1	0 1	" white* . lb.	..	0 6	..
Peas gal.	0 7 $\frac{1}{2}$	0 10	1 0	Reed . 100 sheaves	10 0	11 0	12 0
Treacle lb.	0 2 $\frac{1}{2}$	0 3	0 5	Lath-nails . . 1000	..	1 4	..
Starch "	0 6	0 6	0 6	Board , lb.	..	0 4	..
Saffron oz.	2 0	2 6	4 0				

† It is reputed, on good authority, that twenty years after the date of these extracts the best potatoes sold at Penzance did not average above 2s. 6d. to 3s. per Cornish bushel; for the capacity of which see note in preceding page.

The following prices at a later period were copied from the day-books of two shopkeepers in Penzance :—

A.D.		£.	s.	d.	A.D.		£.	s.	d.
1794	$\frac{1}{4}$ thousand pins	0	0	2	1793	2 lbs. of Souchong tea	0	10	0
	1 lb. salt	0	0	$1\frac{1}{2}$		at 5s.			
1797	6 tumblers at $5\frac{1}{2}d.$	0	2	9		$7\frac{1}{2}$ lbs. of best cheese	0	4	10
	1 dozen glasses	0	4	0		at 8d.			
	2 lbs. of Souchong tea	0	11	0		Loaf of sugar, $12\frac{1}{4}$ lbs.	0	18	$4\frac{1}{2}$
	at 5s. 6d.					at 1s. 6d.			
	5 lbs. of starch at 11d. . . .	0	4	7	1805	Yellow soap, per lb. . . .	0	0	9
	4 lbs. of salt at $1\frac{3}{4}d.$	0	0	7		Treacle	0	0	$4\frac{1}{2}$
	1 lb. of coffee	0	4	0		Rice	0	0	5
1798	1 lb. of treacle.	0	0	5		Cheese	0	0	9
	21 lbs. best double Gloucester cheese at $7\frac{3}{4}d.$ }	0	13	$6\frac{3}{4}$	1813	Candles, common, per lb. .	0	1	2
	2 lbs. of loaf sugar at }	0	3	0		Mutton	0	0	$9\frac{1}{2}$
	1s. 6d.					Veal	0	0	$4\frac{1}{2}$
	28 lbs. of yellow soap . . .	1	0	0		Pork	0	0	$6\frac{1}{2}$
	$5\frac{1}{2}$ lbs. of starch at 8d. . . .	0	3	8		Cheese	0	0	10
						Treacle	0	0	5
						Yellow soap	0	0	10

The Cornish newspapers for twenty or thirty years past, contain weekly lists of the prices of corn, meat, &c., in Penzance market, and the farmer of the market states that no other record of them is preserved; as a file of these newspapers cannot easily be procured, no information upon this point can be now given.

Condition of the Labouring Classes.—No account can be given of the number of labourers employed in agriculture, or in other branches of industry. There can be no doubt that the number of the latter has increased of late years, but apparently with a gradual augmentation in a proportion corresponding with the increased number and luxuries of the inhabitants. It does not appear that any Irish labourers come to this neighbourhood, nor that any labourers are employed but such as live within the district or the neighbouring parishes. The number of agricultural labourers residing at the farms has long been gradually diminishing, and at present that class generally reside in their own houses. The average rent of a labourer's cottage in the parish is about 3*l.*, and the average cost about 35*l.* Some are built of stone, some of mud, some of both; and roofed sometimes with reed, and sometimes with slate. In the town the average rent seems to be about 5*l.* 5*s.*, and the cost about 60*l.*; the houses being generally built of stone and covered with slate, but many are built of stone and timber.

There are no allotments in the district; and there does not appear to be any right of common enjoyed by the entire population of either the town or the parish, except with respect to the sand and sea-weed on the beach, which the inhabitants have always taken in any quantity without payment. There are several tracts of waste land in the parish, over which the tenants of the farms immediately adjoining have common of pasture and turbary.

The average yearly wages of labourers living upon the farm is 12*l.*; and the weekly wages of the same class above eighteen years of age is about 9*s.* If living at their own houses they receive about 10*s.* weekly. The usual wages during the harvest-month to farm-labourers is 2*l.* 15*s.*, besides meat. Those coming from a distance are also lodged. If they

are hired by the week during harvest they receive about 12s., besides meat. Many labourers on farms receive part of their wages in corn, potatoes, furze, potatoe-ground, and house-room; but none are known to receive any part in beer or other liquors. The harvest-labourers have "croust," which means beer and cake, or bread and cheese, given to them when in the field, but this is not reckoned as part of their wages. There are some master-masons at Penzance who sell bread, groceries, &c., and these, it is stated, generally pay their labourers partly in goods and partly in money. The yearly wages of female servants employed by farmers average at present 3*l.* 10s. to 4*l.*, but they have been lately, and are still, increasing. The yearly wages of female servants employed by tradesmen in Penzance average 5*l.* The rate of these also is increasing. The number of male and female servants, according to the census of 1831, was—

	Males.	Females.	Total.
In Penzance. . . .	21	121	142
,, Madron	18	87	105
Total	<u>39</u>	<u>208</u>	<u>247</u>

The average weekly wages of journeymen in various trades when in full employment are as follow :—masons 16s.; carpenters 15s.; curriers 18s.; printers 18s.; tailors, men 13s., women 7s. Shoemakers earn at piece-work about 16s.; and hatters, also at piece-work, 21s. a week.

The following extracts from the account-books of the corporation of Penzance are interesting, as shewing the prices of labour in this district at various periods during the last two centuries :—

A.D.		£.	s.	d.
1656, May,	Paid S. and C. and their boy for 8 days' work in painting the market-house	1	4	0
1657	For breaking stones behind the quay, 12 men at 1s. 2d. a day	0	14	0
	Paid 6 men for carrying the stones, 30 days at 1s.	1	10	0
1660, July,	70 foot of hewn stone for the "stayers" (stairs), at 5d. per foot	1	9	2
	Paid for 44 days to quarry, at 1s. 6d.	3	6	0
	Paid the boy to tend them for 15 days, at 6d.	0	7	6
	Paid for "bousing" the streets at 1½d. per yard, 616 yards	4	9	10
	14 days for 1 horse, at 9d.	0	10	6
	2 horses, 24 days at 8d.	0	16	0
	8½ days for man and horse	0	11	0
	2 days' work to the masons, 2 men at 1s. 6d. per diem	0	6	0
1661	Paid J., and horse-hire for putting Mr. W. to Launceston (71 miles)	1	0	0
	For 15 men to cleanse the leats and bring home the water, 3 days	2	6	8
	R. B. for "beating the drum" at the Coronation	0	5	0
1662	To 4 helliers and a boy, for 4 days' work about the market-house after the great storm	0	19	4
1663	Drawing the King's Arms and Commandments	4	0	0
	Mr. J. S. for riding the country in getting the Coinage petition signed, and for his attending of it at Truro (27 miles dist.)	1	10	0
	To Col. Godolphin's clerk for bringing home the Coinage charter	1	0	0
1672	4 men, 5 days carrying earth, at 8d.	0	13	4
	A man, 14 days at 9d.	0	10	6
	2 men, 6 days at 10d.	0	5	0
1712	2 masons about the quay, 8 days at 1s. 4d.	1	1	4
1721	4 masons one day about the quay, at 1s. 4d.	0	5	4
1723	114 men at the quay, at 9d. per day	4	9	3

		£.	s.	d.
1724	A man and horse carrying clay, 11 days at 2s.	.	.	1 2 0
	A mason, 1 day	.	.	0 1 3
1740	3 masons, 2 days at 1s. 4d.	.	.	0 8 0
1759	Building brick wall, 51 perches at 8s. 6d.	.	.	.
	stone wall, 56 perches at 4s. 3d.	.	.	.

The following information is gathered from a book of expenses kept by a clergyman, residing within three miles of Penzance, during the period from 1746 to 1770 :—

	£.	s.	d.
Paving the pigeon-court (19 yards)	.	0	3 2
Gardener, per diem	.	0	1 6
Tailor, „	.	0	0 8
Carpenter and mason, each, per diem	.	0	1 4
A woman (the usual wages)	.	0	0 3
Ditto (at harvest-time)	.	0	0 6
Maid servant's yearly wages in a gentleman's house	.	2	10 0
Man servant's ditto ditto	.	4	5 0

The general rise in wages since the foregoing period is attributable not to local, but to general causes.

It appears that no labourer in the district keeps a cow except for the purpose of selling the milk, nor a donkey, except for hire. Pigs are kept by about 9 out of 10 families belonging to this class in the parish, and by about 1 in 10 in the town. Poultry are rarely or never kept by labouring families in the parish, on account of the mischief which they do in the fields and gardens, but in the town a few families keep them. Dogs are kept by about one-tenth part of the labouring families. Flowers are very generally cultivated, either in flower-pots in the windows or else in little plots in front of the labourers' houses, where there is not sufficient land attached to them for the cultivation of vegetables. In Penzance very few, if any, families of the labouring class bake at home, as public ovens are numerous; but in the parish of Madron, where the houses are very much scattered, almost all the families bake at home. Not any families of this class brew at home. The number of public-houses in August, 1838, was in Penzance 24, and in Madron 5; the number of beer-shops at the same time in both places was 37. The number of public-houses in Penzance has not varied during the last five years, with the exception of one new house opened about two years ago near some extensive rows of houses recently built. In Madron they have increased during the same period from 3 to 5. The number of beer-shops in the town and parish has been in each of the same five years, respectively, 28, 36, 41, 41, and 37. There is no bowling-green nor public ground adapted for cricket or other similar games in the district. In Penzance there are only about half-a-dozen skittle-grounds, called "*kayle-alleys*," all of which are attached to public-houses or beer-shops; but out of the town most of the beer-shops have them. It is stated by a person who frequents the public-houses in Penzance, that no periodical publications are taken in there exclusively for the labouring classes, and that the newspapers which are to be found in them are the provincial journals, and such of the London papers as are generally read by all classes of society.

Clubs and Societies among the Labouring Classes.—It appears from enquiry among the labourers and workmen, that there is no social club

existing among them in this district, except those among the hatters and curriers. The majority, if not all, of the few journeymen hatters in Penzance, are stated to be members of "The Hatters' Union of Great Britain and Ireland," constituted at Manchester on the 22nd April, 1833. With respect to the curriers, one-half of the journeymen in this district are stated to belong to "The United Society of Journeymen Curriers," which, with its branches, appears to be the only Society of curriers in England.

A *Temperance Society* was established at Penzance in 1835, and its Secretary states, that the number of its members amounted to about 400 in February, 1838, when the *Total Abstinence Society* was established in the town, and then the Society ceased to hold its meetings. The number of the members of the Abstinence Society has since increased in so extraordinary a degree, that in August, 1838, they amounted to about 2,100 in the town and parish. A very small proportion of the gentry is among its members.

Friendly Societies.—There are twenty *Friendly Societies* in the district, an account of which is subjoined. The particulars are extracted either from the enrolled or printed copies of their different rules, with the exception of the two last, respecting which the necessary particulars have been obtained from the Secretary of the former. As some of the Societies object to the number of their members being published, this part of the information has been suppressed in every case. All these Societies are in Penzance; there are not any in Madron. They are arranged, as far as possible, according to the respective dates of their formation. There are no records of any Friendly Societies which formerly existed and have been since broken up.

No. 1. *The First Friendly Society*, founded 26th October, 1768, enrolled 21st October, 1831,—admits any persons but soldiers, sailors, fishermen, and tinnerns. Limitation of age not stated. Contributions, 1s. 2d. per month, and 9d. per quarter for the surgeon, with 2s. on the quarter-day next after the death of a member. Distributions to each member disabled from following his business, and on the death of a member:—7s. per week till the member shall have received back all he has paid, and then 4s. per week until recovery or death; 5l. on death to the member's representative.

No. 2. *The Friendly Club*, founded 4th November, 1768, enrolled 25th February, 1831,—admits any but soldiers, sailors, fishermen, tinnerns, livery-servants, and bailiffs, not being above thirty-five years of age. Contributions, 3s. per quarter, 9d. for the surgeon, and 9d. for expenses. Distributions the same as in the last, except that 15l. is paid at death.

No. 3. *The Union Club*, founded 1768, enrolled 11th April, 1834,—admits any but soldiers, sailors, fishermen, miners, and bailiffs, not above thirty-five years of age. Contributions 4s. 6d. per quarter, of which 6d. is for the surgeon. Distributions 6s. per week, until the member has received back all he has paid, and then 3s. till recovery or death; 14l. on death.

No. 4. *The Penzance Annuity Society for the Benefit of Widows*, founded 1796, enrolled 8th January, 1836,—admits no new members. Contributions, 2l. 2s. per annum. Distribution, 20l. per annum to the

widow during widowhood. The funds of this society have accumulated so much, owing principally to buying and selling out stock in the public funds at a great advantage, that the members of it have divided among themselves a considerable part of their accumulations, which are still far beyond what the widows can require.

No. 5. *The Female Society*, and No. 6. *The Consolation Society*.—These two societies were established many years ago, but their rules are not enrolled; and the only particulars which can be obtained respecting them are, that they are exclusively “death-clubs,” each member paying 1s. on the death of a member to the representative of that individual.

No. 7. *The Penzance Second Benevolent Society*, founded 1814, enrolled 20th November, 1835,—admits any except soldiers and sailors. The wives of members are also members, as well as their widows upon their giving notice thereof. Age limited, from 17 to 50. Contributions and distributions: on the death of a man, 1s. from each man to the representative of the deceased member; on the death of a wife or widow, 1s. from each of the married men, widowers, and widows, to her representative, with 4d. per annum for expenses.

No. 8. *The Young Tradesmen's Society*, founded 28th January, 1825, rules certified 10th July, 1835,—admits any except soldiers, sailors, fishermen, miners, and bailiffs, of ages between 17 and 35. Contributions, 2½d. per week, the ½d. being for the surgeon, with 1s. on the death of a member, and 1s. from every married member on the death of a member's wife. Distributions, 6s. per week for the first 3 months; 5s. for the next 3 months; and then 4s. until he has received back, at this last rate, as much as he has paid; afterwards 2s. 6d. per week: also 1s. from every member to the representatives of each deceased member, and 1s. from every married member to each member on the death of his wife.

No. 9. *The Philanthropic Society of Boot and Shoe Makers*, founded June 1826; Date of last rules, January, 1834,—admits all boot and shoe makers residing within Penzance, except apprentices. Age not above 35. Contributions and distributions the same as in the last, except that the weekly payment is 2d. instead of 2½d., and the last weekly allowance is 2s. instead of 2s. 6d.

No. 10. *The New Friendly Club*, enrolled 24th July, 1827,—admits any but soldiers, sailors, fishermen, and tinnerns. Age not above 40. Contributions, 3s. per quarter, with 9d. for the surgeon, and 9d. for expenses; also 1s. at the death of a member. Distributions, 7s. per week until the member has received back all he has paid, and then 4s. till recovery or death.

No. 11. *The Penzance Philanthropic Society*, founded December, 1828, rules certified in August, 1837,—admits all persons residing in Penzance, except soldiers, sailors, fishermen, miners, and bailiffs. Ages from 17 to 35. Both the contributions and distributions are the same as in No. 8.

No. 12. *The Good Samaritan*, founded 2nd January, 1829, enrolled 4th January, 1833.—Limitation of members not stated. Ages 16 to 35. Contributions, 2d. per week and ½d. per week for the surgeon, with 6d. per annum for expenses, and 1s. on the death of a member;

but not to exceed 1s. per month each member. Distributions the same as in No. 2, except that on the death of a member 1s. from each member is given to the representative of the deceased.

No. 13. *The First Benevolent Female Society*, founded 6th January, 1829, rules certified 28th October, 1834,—admits any female living within three miles of Penzance. Age not above 40. Contributions, 1½d. per week, the ½d. being for the surgeon, with 3d. per annum for expenses, and 1s. on the death of a member. Distributions, 3s. 6d. per week for the first eight weeks, 2s. 6d. for the next eight weeks, and 1s. per week afterwards, but nothing for one month after child-birth; also 1s. from each member to the representative of a deceased member.

No. 14. *A Friendly Club*, enrolled 21st October, 1831,—admits any but soldiers, sailors, fishermen, and tinnors. Age not above 40. Contributions, 3s. per quarter, with 9d. per quarter for the surgeon, and 3d. for expenses. Distributions the same as in No. 1, except that 15l. are given to the representatives of a deceased member.

No. 15. *Annuitant Society*, enrolled 11th April, 1834, pursuant to 3 Will. 4, c. 14, for granting Government Annuities, immediate or deferred, for life or years, not exceeding 20l. per annum; the whole of the money paid being returnable if the party do not live to the age at which the annuity is to become payable, or if he be unable to continue his monthly or annual instalments.

No. 16. *The Penwith Annuitant Society for the benefit of Widows and other female Relatives*, founded 27th January, 1837, enrolled 1838,—admits any persons, male or female, except soldiers, sailors, and working miners. Age not above 50. Contributions, 2l. per annum, payable half-yearly, if the member on admission be under 25 years of age; 2l. 10s. from 25 to 30; 3l. from 30 to 35; 3l. 10s. from 35 to 40; 4l. from 40 to 45; and 4l. 10s. from 45 to 50. Also at entrance 1l.; and, if the member be older than his nominee, he pays a certain additional sum on entering, regulated according to the disparity in their ages. Distributions, a sum not exceeding 40l. per annum, payable half-yearly, on the death of a member, to his nominee.

No. 17. *The Mount's Bay Friendly Society*, founded 17th October, 1837,—admits any except soldiers, sailors, miners, bailiffs, and such fishermen as are not employed in the Mount's Bay Drift or Sean Fishery. Ages, 18 to 35. Contributions, 3d. per week, including ½d. for the surgeon, and 6d. per annum for expenses; also 1s. on every death; also 1s. from each married man and from each widower, who had before received benefit at the death of his wife, on each death of a member's wife: but no member to pay more than 1s. per month. Distributions, 7s. per week for the first 3 months; then 5s. 6d. for the next 3 months; and 4s. 6d. for the 3 following; after which 3s. 6d. per week until the member has received back at this last rate as much as he has paid, when the allowance is reduced to 2s. 6d. per week. Also, in cases of death, the representatives of the deceased member receive 1s. from every member.

No. 18. *The One-and-All Accumulation Society*, founded 11th December, 1837, rules certified 12th February, 1838. Contributions, from 6d. to 1s. 6d. per week for 7 years. The amount contributed by each member may be withdrawn by him in case of sickness or

poverty, and upon his death it is paid to his representative. The interest and profits are to be divided among the members every $3\frac{1}{2}$ years, and at the end of every 7 years each member receives back all his deposits.

No. 19. *The Male Tee-total Club*, founded 15th June, 1838; rules certified November, 1838,—admits any persons within 10 miles of Penzance who are members of the Total Abstinence Society. No limit as to ages. Contributions, 1*d.* per week, and 6*d.* on every death. Distributions, 7*s.* per week as long as the funds are sufficient; also 6*d.* from each member to the representatives of a deceased member.

No. 20. *The Female Tee-total Club*, founded November, 1838.—The regulations and payments are the same as in the preceding, except that the members do not receive any payment during the four weeks of their accouchement.

Savings' Bank.—There is a savings' bank in Penzance, which was established in the year 1818; but Mr. Edmonds was unable to obtain any information as to the state of its funds, or the number and class of the depositors, owing to the labour which the preparation of such returns would impose upon the secretary.*

Charitable Institutions.—There are five charitable institutions within the district, of which the following is an account:—

No. 1. *The Penzance Public Dispensary and Humane Society* was established in 1809, “to afford medical and surgical assistance to those who are not able to procure it; to rescue the poor from small-pox by encouraging vaccination; to endeavour to effect the recovery of persons in cases of suspended respiration; and to impart necessaries and comforts as far as the funds will admit. This charity does not extend its advantages to domestic servants, to parish paupers, nor to those who by Benefit Societies or in any other way are provided with medical or

* The following particulars, which will supply part of the deficiency, have been obtained through the kindness of Mr. Tidd Pratt. The change during the two years in the relative amount of deposits by Charitable Institutions and Friendly Societies is worthy of notice.—*Ed.*

Account of the number of Depositors and the Sum Deposited (including Interest) in the Savings' Bank of Penzance, classed according to the Amount of the Deposits, in each of the years ended 20th November, 1837, and 1838.

Class of Depositors.	1837.			1838.		
	No. of Depositors.	Amount of Deposits.		No. of Depositors.	Amount of Deposits.	
		£.	s. d.		£.	s. d.
Not exceeding 20 <i>l.</i> . .	474	4,244	3 3	492	4,420	16 0
From 20 <i>l.</i> to 50 <i>l.</i> . .	520	15,662	13 4	529	15,967	6 0
“ 50 “ 100 . .	255	17,029	18 10	270	18,610	0 9
“ 100 “ 150 . .	76	8,925	17 9	73	8,587	10 0
“ 150 “ 200 . .	28	4,698	19 5	34	5,650	4 5
Exceeding 200 . .	13	2,710	9 9	13	2,669	15 8
Total of Individuals .	1,366	53,272	2 4	1,411	55,905	12 10
Charitable Institutions .	9	2,397	6 7	7	463	15 10
Friendly Societies . .	8	352	1 11	13	3,208	14 4
Total . . .	..	56,021	10 10	..	59,578	3 0

surgical aid." The number of its annual contributors in the year ended April, 1838, was 95. The amount of its receipts in the same year was 143*l.* 16*s.* 5*d.*, and its disbursements were 188*l.* 6*s.* 10*d.* The number of patients relieved was 941, of whom 739 were medical and 202 surgical cases, besides 77 children vaccinated. The average cost of each patient in the same year was 4*s.* 2½*d.* The highest cost in any year since 1818 was 5*s.* 8*d.*, and the lowest 3*s.* 2½*d.* The number of patients had increased from 478 in 1818 to 941 in 1837. The Report of this institution for the year 1836-7* contains some useful tables with regard to the population and mortality of the county and of the western division of Penwith.

No. 2. *The Humane Society* was established in 1810, for visiting the sick and afflicted of all denominations at their own habitations. It is supported by monthly subscriptions, the annual amount of which, received from 42 subscribers, in 1837, was 18*l.* 8*s.*, which was distributed in money during the same year among 170 persons.

No. 3. *The Indigent Sick Society* was established about the year 1823 for the same purposes as the last. The only difference is that this is supported by females, while the other is entirely supported by males. The subscriptions, amounting in number to 60 or 70, are quarterly, monthly, and weekly. The total amount contributed in 1837 was 19*l.* 12*s.* 5*d.*, and the number of persons relieved was 419.

4. *The Penzance Dorcas Society* was established about 1823, for the purpose of "uniting Christian instruction with temporal relief to the most necessitous poor of all denominations, which relief should chiefly consist in the distribution of plain and necessary articles of clothing." It is supported by contributions, the amount of which in 1837 was 21*l.* 3*s.* 8*d.*, received from 73 individuals. In the same year the number of persons relieved was 109, and the number of garments distributed was 111.

5. *The Mount's Bay Ladies' Dorcas Charity* was founded in February, 1827, and it extends its benefits to all the neighbouring parishes. Its object is "to encourage industry and providence among the poor, and to enable them to obtain good clothing at a cheaper rate than in any other manner." It is supported by annual subscriptions. "The garments are cut out by the ladies, and the work is given to poor old respectable women, who are paid for it." These garments are sold at half-price to the poor. In 1837 the number sold was 769, and the number of purchasers was 402.

Education.—According to the census of 1831, the population of the town and parish were respectively,—

	Males.	Females.	Total.	Males above 20.	Males under 20.
Penzance . .	2,845	3,718	6,563	1,450	1,395
Madron . . .	978	1,080	2,058	492	486
Total . .	3,823	4,798	8,621	1,942	1,881

* Appended to Mr. Edmonds' Returns.

It appears from a personal enquiry made by Mr. Edmonds in the months of May and June, 1838, that there were in the town of Penzance, 50 daily schools, containing 1,532 scholars, of whom 801 were boys and 731 girls. In Madron there were 7 daily schools, with 283 scholars, of whom 121 were boys and 162 girls. Total, 57 daily schools, with 1,815 scholars, viz., 922 boys and 893 girls.

The Sunday schools, exclusive of three daily schools, in which the scholars attend likewise upon the Sunday, were in Penzance 6, and in Madron 2; the number of children in them, who attended no daily school, were, in Penzance 145, and in Madron 62, viz., in both, 120 boys and 87 girls; total, 207 Sunday scholars, who went to no daily schools. Hence the total number of children receiving education in the town and parish was 2,022, of whom 1,042 were boys and 980 girls.*

The average attendance of the daily scholars appears to be greater among the boys than among the girls. The exact proportion cannot be given; but the probable daily attendance on an average throughout the year appears to be, among the boys four-fifths, 736 boys, and among the girls three-fourths, 670 girls; in all 1,406.

The classification of the schools recommended in the Society's Queries has not been adopted, as it was considered impracticable; for the reason that the dame-schools could not be distinguished from the common daily schools, nor the latter from the boarding and day schools, inasmuch as children of all ages from 3 to 16 years are generally found in each school.† There is no school exclusively for boarders, but there are three in which some of the scholars are boarded. Two of these are for boys, containing each from 60 to 70 scholars. The Latin and French languages are taught in them: the master of one, being a member of the Established Church, takes his boarders to church, and teaches them from the church catechism; while the master of the other, being a Wesleyan, takes his boarders to the Wesleyan chapel, and instructs them from the Wesleyan catechisms. The third is a ladies' boarding and day school, in which the boarders are brought up in connection with the Established Church. There has been no infant school in this district for some years; but there was one in Penzance several years ago.

* The following estimate, although avowedly vague, will serve as the basis of an approximation to the extent of education among the male population of the district. The proportion of males to females in 1831 was as 100 to 125, and of males under 20 to males above that age, as 100 to 103. It is believed that the population has increased about 2,000 since that year. If the sexes and ages of this number remain in the same proportions, there will be 886 males, of whom 435 are under 20 years of age, to be added, in order to shew the male population of 1838; which will therefore amount to 4,709 persons, of whom 2,316 are under 20 years of age. According to the census of 1821, in which alone the ages of the population are distinguished, the proportion which boys in Cornwall between 5 and 15 bore to those between birth and 20 was 41 per cent., and between birth and 5 years, 30 per cent.; hence, supposing the proportions in this district to be the same, the number of boys between 5 and 15, in 1838, in Penzance and Madron, would be 950: and between birth and 5 years of age, 694. The same calculation cannot well be applied to the females, as the excess of that sex in the town arises in a great measure from the number of female servants, who of course, whatever their age, are unable to attend school.—*Ed.*

† The distinction adopted by the Statistical Societies of Manchester and London with regard to dame-schools, viz., to consider as belonging to that class the schools in which nothing but reading and a little sewing are taught, was not defined in the Society's Queries.—*Ed.*

Four of the daily schools are endowed, or otherwise privileged. The following is an account of each :—

No. 1. *The Classical School at Penzance*, where the number of boys in June, 1838, was 15; the master, who must be a clergyman, receives 50*l.* per annum from the corporation of the borough; he also receives the interest of 100*l.* stock, 3½ per cents., from the executors of Sir Humphry Davy, on condition of his giving the boys a holiday on Sir Humphry's birthday, the 17th of December.* The corporation has also provided a school-room and play-ground.

No. 2. *The Endowed School at Madron Church Town*. This school, the present master of which is the clerk of the parish of Madron, contains 60 children, of whom 45 are boys and 15 are girls. The present total revenue, independently of the school-room, and the house and garden occupied by the master, is 106*l.* 17*s.* 6*d.* per annum, derived from houses and lands within two miles of the school. It was founded in 1704, by George Daniel, Gent., and endowed by him for the education of 60 poor children, either boys or girls, belonging to Penzance, Madron, or Morvah, the latter being a parish connected with Madron: all the children are educated and furnished with books, &c. without any payment.

No. 3. *The National School at Penzance*, which was established in 1833, and is supported chiefly by voluntary annual subscriptions, but partly by the weekly payments of the children, of whom the greater number pay 1*d.* a week, while a few in the highest classes pay 2*d.* It contained in May, 1838, 375 scholars, of whom 225 were boys and 150 were girls. A lending-library of about 1000 volumes is attached to this school.

No. 4. *The Free School at Chyandour*, in Madron, which is supported by the Bolitho family. The children pay 1*d.* per week. It contained in May, 1838, 60 girls and 6 boys.

At nearly all the schools the entire scriptures are read, and no school appears to be confined to any catechisms, or books recommended by persons of any particular religious opinion, except the National School, the Endowed School at Madron Church Town, and the Free School at Chyandour; at all of which the books of the National Society, and others of a similar character, are used, and the scholars in which attend the Established Church on Sundays. Sometimes the cheap spelling and reading books of the Sunday-school Union are met with in the inferior schools. The subjects of instruction are principally reading, grammar, writing, and arithmetic, mathematics, history, ancient and modern, geography, and the French, Latin, and Greek languages. The system of teaching, except in the National School, and the Endowed School at Madron Church Town, where the "National" method is used, is generally the old system, without monitors, and without interrogation; but in the principal schools extemporaneous interrogation is practised.

The following particulars of the Sunday schools in this district were furnished partly by the ministers and partly by the secretaries of the different schools. They are all under the superintendence of the respective religious denominations by which they are designated. This enumeration does not include the National School at Penzance, the

* This bequest, as well as the circumstances of this school, and of the endowed school at Madron, are noticed in Mr. Whishaw's Account of the Endowed Charities in Cornwall. *Journal*, Vol. I. p. 151.

Endowed School at Madron, and the Free School at Chyandour, in which three daily schools the scholars are required to attend upon Sundays also. The number of children in these three schools, as stated in the preceding page, amounts to 501.

Table of Sunday Schools in Penzance and Madron.

Designation.	Date of Establishment.	Total Number of Scholars. in June, 1838.			Number of Scholars who do not attend any Daily School.		
		Boys.	Girls.	Total.	Boys.	Girls.	Total.
In Penzance.							
Wesleyan, in Jennings'-st.	1816	68	75	143	41	37	78
Wesleyan, in St. Clare-st.	1831	50	70	120	10	5	15
Independents, or Congregational Dissenters . . . }	1820	30	30	60	10	10	20
Jordan Baptist }	1824	45	21	66	24	..	24
Primitive Methodist }	1833	15	17	32	1	4	5
Baptist }	1836	14	26	40	2	1	3
Total }	..	222	239	461	83	57	145
In Madron.							
Wesleyan, in Madron } Church Town }	1819	37	55	92	19	20	39
Wesleyan, in Tregavara . }	1825	16	18	34	13	10	23
Total in Penzance and } Madron }	..	275	312	587	120	87	207

With reference to the portion of the adult population which is able to read and write, the following information, which is worthy of notice, as pointing out a simple and easily available test of the extent of instruction in any part of the country, is of much interest. It appeared that the marriage-registers, in which the parties who are married, both male and female, are obliged to write their names, or subscribe their marks, would afford a means of shewing, not only the proportion of adults able to write at the present time, but the comparative progress of instruction in writing among the same class at more distant periods, distinguishing the sexes. Accordingly three periods have been selected.

The first period embraces the 6 years ending with December, 1837, during which time 517 marriages were entered. The number of signatures therefore was double that number, or 1,034, out of which 648 were names and 386 were marks. As the average age of marriage in this district, as before shewn at p. 204, is about 25 years, and the mean of the above observation of six years is the end of the year 1834, it follows that in the year 1834, among the population of the age of 25, the proportion of persons who could write* was 648 out of 1,034, or 62·6 per cent.

But the proportion of the men who could write greatly exceeded that of the women; for out of the 386 marks 136 were by men and 250 by women. Hence the proportion of men who could write was raised to 73·6, and that of females reduced to 51·6, the average being 62·6.

* This seems to require some limitation: it should properly be "write their names."—[See note at p. 228.]—Ed.

The second period refers to the five years ending with 1804, and exhibits therefore the proportion of the population of the age of 25 who could write in 1802, which is the mean of the observation. During this period there were 215 marriages entered; consequently, the number of signatures was 430, out of which 184 were marks and 246 were names. Hence the proportion of persons who could write in 1802 was 57·3 per cent., which is 5·3 per cent. less than the proportion in 1834; manifesting thus some progress in the diffusion of writing during the 32 years which elapsed between 1802 and 1834.

But this progress was principally among the females; for, out of the 184 marks, 62 were by men, and 122 by women; hence the proportion of men who could write was 71·2 per cent., or 2·4 per cent. less than in 1834, while among the females the proportion was 43·3, or 8·3 less than in 1834.

The third period of observation extends over the eight years commencing with 1754 (old style), when the printed marriage-register was first used, and the parties were first required to subscribe the entries, and ending with 1761. During these eight years the number of marriages entered was 194, and of signatures 388. Of these, 178 were marks and 210 names. The proportion of the latter being 54·2 per cent., which is about 3 per cent. less than in 1802, and about 8 per cent. less than in 1834.

The improvement, in this period also, was chiefly among the females; for, of the 178 marks, 57 were by men, and 121 by women. Consequently, the proportion of men who could write was 70·7, or only 0·5 per cent. less than in 1802, while the proportion of females was 37·7 per cent., or 5·6 per cent. less than in 1802.

The following are the results of the above three observations, from a comparison of which the gradual progress of instruction will be easily perceived. The proportionate number of persons about 25 years of age, who could write, were, in each of the under-mentioned years, as follows:—

	No. in each Year.			Per-Centage Increase.		
	1758.	1802.	1834.	From 1758 to 1802.	From 1802 to 1834.	From 1758 to 1834.
Men .	70·7	71·2	73·6	0·5	2·4	2·9
Women	37·7	43·3	51·6	5·6	8·3	13·9
Both .	54·2	57·3	62·6	3·1	5·3	8·4

If the mean of the progress (5·3 per cent.) made between 1802 and 1834 be deducted from the proportion (62·6) of persons who could write in 1834, the remainder, or 60 per cent., will probably be about the proportion of those who can read and write among the entire adult population of the district at the present time.

Before passing to the non-adult population it may not be useless to notice the following further information:—

	From 1751 to 1761.	From 1800 to 1801.	From 1832 to 1837.
Marriages in which—			
Neither of the parties could write	44	49	108
Only one ,,	90	86	170
Both ,,	60	80	239
Total number of Marriages	194	215	517

With regard to the non-adult part of the population, data are not so easily obtained; and the following information must be admitted to be limited and imperfect. As the facts refer to a school of boys and girls of the average age of 10 years, the results must be considered applicable solely to the population of that age. It must be borne in mind that children under 6 years of age are not taken into account, as they are too young to be able to read and write. It was found that in one of the Sunday schools, selected on account of the children being generally considered to be among the least instructed of the Sunday scholars in the town, and to afford therefore an average specimen of all the children in the district, including those who do not go to any school, the following number of children could write:—

	Boys.	Girls.	Total.
Total number of children	50	60	110
Number under 6, too young to write	8	4	12
Number who were old enough to write	42	56	98
Number who were able to write	36	22	58
Number who were unable to write	6	34*	40

Upon the assumption that this school is a fair average, if the 12 children who are too young to write be deducted from the total number, the remaining 98 will represent the population at the age of 10 years, and, of these, 58, equal to 59·1 per cent., can write. But the proportion is twice as great among the boys as among the girls, being 85·7 among the former, and only 39·2 among the latter.

Thus the same result, within a fraction, has been unexpectedly arrived at with respect both to adults and non-adults; viz., that about 60 per cent. is the proportion of those who can read and write in 1838, among all the population of this district above 6 years of age.† But while the proportion is thus the same among the adults and non-adults, and indicates no progress in the entire population, it appears that of late the proportion of instruction, at least in writing, is greatly increasing among the male population, and greatly decreasing among the females; which is the reverse of what might be expected, from the before-mentioned results of the examination of the marriage-registers at different periods.

With respect to the proportion of the population which can only read no satisfactory information can be obtained; but the general opinion is that, if 60 per cent. can read and write, about 20 per cent. can read only, and 20 per cent. can neither read nor write.

* But these 34 girls can all read.

† As it appears improbable that education has remained stationary during the last twenty years, (which it must have done in order to produce these results,) notwithstanding the rapid progress of extension and improvement in Penzance, and the general impetus which has been given during that period to education throughout the kingdom, there is reason to suspect some hidden cause of imperfection in the comparison; and the following suggests itself as the most probable. The return from the school exhibits the number of children who, being under a regular course of instruction, have not been taught to write until they have acquired some proficiency in reading. On the other hand, amongst adults, there is reason to believe that many are able to sign their names, in a sufficiently legible manner, who have never learned to read; and a far greater number, who have never advanced beyond spelling or reading in the most imperfect manner.—Ed.

Libraries and Public Institutions.—There are four libraries in the district. The principal, which is the “Penzance Public Library,” was established in 1818, and is supported by annual subscriptions. The number of volumes in it at the end of 1837 was 4,550. The books are allowed to circulate. The average amount of income annually applied to the purchase of books is about 50*l.* The total income in 1835, according to the last report printed, was 139*l.* 7*s.* 8*d.* The other three are circulating libraries, supported partly by periodical subscriptions, and partly by payments according to the time that the readers detain the books. Two of these libraries consist principally of novels, and amount to about 1,500 volumes, of which about 250 are constantly in circulation; the third consists of about 500 volumes of various kinds of literature, but, as it was only established in November, 1838, nothing can be said respecting the extent of its circulation. The national school also has a library of about 1000 volumes, and there are six or eight book-clubs, which sell their books as soon as they have read them. Many religious books and tracts are also circulated by the different religious denominations in the district.

One of the chief scientific societies in Cornwall is established in Penzance. The “Royal Geological Society of Cornwall” was founded in 1814, and the number of its ordinary members in 1838 was 119. It possesses a very valuable collection of minerals in its museum, and its Transactions have obtained a high reputation throughout the kingdom. Its president is Davies Gilbert, Esq., V.P.R.S., and it ranks among its members and correspondents some of the most eminent geologists and miners in the kingdom.

The “Penzance Institution for promoting Useful Knowledge” was established in 1831, for the purpose of holding weekly lectures followed by discussions. These continued until April, 1838. At present the operations of this institution are suspended, owing to the want of a sufficient number of lecturers to maintain a continued succession of lectures. The number of members in April, 1838, was 40. “The Mechanics’ Institution” in Penzance, at which weekly lectures followed by discussions were also given, ceased to exist a year or two prior to the suspension of the last-mentioned institution. At present, therefore, there are no periodical lectures or discussions in this district.

There are two News-rooms. The “Gentlemen’s News-room” was established in 1799, and possessed in 1838 50 annual members, the limited number, and 10 monthly members. The “Commercial News-room” was established in 1826, and possessed in 1838 40 annual members.

Religious Institutions.—The following information will convey as good an account as can be furnished, of the number of persons belonging to each religious persuasion in the district, and of the accommodation which has been provided by each for public worship. The particulars have been chiefly obtained from the ministers of the several denominations.

There are two places of worship belonging to the Established Church in the district; the parish-church of Madron, conveniently situated in the parish, nearly three miles from the northern extremity, and about one mile and a half from the southern extremity; and the chapel of ease in Penzance. In the former the number of sittings, from a single

calculation upon inspection, is about 800; most of them are appropriated and none paid for—the free or unappropriated sittings are supposed to be about 150. The chapel in Penzance is a new building erected on the site of the old chapel, and was opened on the 15th November, 1835. The former chapel contained only 715 sittings; the present contains (as recorded on a board in the chapel) 2,047 sittings, of which 1,110 are free, including 202 sittings for adults and children on flaps and forms in the aisles and gallery. The funds for its erection were furnished principally by the corporation of Penzance and private individuals, and partly by the Church Building Society. The total income derivable from the pew-rents cannot be stated, as the rates are not yet settled, but the usual rate for each sitting is about 10s. per annum. There are four clergymen of the Established Church officiating and resident in the district, viz., the vicar of Madron and his curate, and the perpetual curate of Penzance chapelry, and his assistant curate, who has a salary from the Pastoral Aid Society.

The following table affords similar particulars relating to the other places of worship in the district, together with further information respecting those of the Established Church. In the denominations and other descriptions of the several religious persuasions, the words of the respective members who gave the information have been adopted, and the order in which they are placed is according to the different periods of their establishment in Penzance.—[See pages 232-33.]

With respect to the appointment of ministers in the chapels not belonging to the Established Church, they are chosen by the members assembling in the chapel, among the Independents and both the Baptist congregations. In all the Wesleyan, Primitive Methodist, and Bible Christians' chapels they are elected by annual conferences of the respective bodies held in various parts of England; in the Jews' Synagogue, by the High Priest, who resides in London; and, in the Holy Catholic Apostolic Church, the ministers, "after being called by God's Holy Spirit through the Prophets, are set in their places by the Apostles."

The ministers are supported in the Independent and Jordan Baptist Chapels, and in the Jews' Synagogue, by the pew-rents and voluntary contributions; in the Baptist Chapel by the pew-rents alone; in the five chapels of the Wesleyan Methodist Society, by the members in the Penzance circuit, the stipend varying according to the circumstances of the ministers; in the two congregations of the Primitive Methodist Connection, by the members in the St. Ives' circuit, the stipend being 16*l.* to an unmarried minister, and 36*l.* 8*s.* to one who is married, with house-rent and furniture; in the Wesleyan Association, by the General Association, of which the body in Penzance is a part, the annual stipend being 60*l.* to an unmarried, and 90*l.* to a married minister; in the congregation of Bible Christians, by the members of the Penzance circuit, the stipend being, in addition to a house and furniture, 12*l.* 12*s.* to an unmarried minister, and 30*l.* to one who is married, with an additional sum for each child.

The church-rate collected in Madron in each of the ten years ending with 1837 has been 66*l.*; the amount not having varied during that period. No chapel-rate for the chapelry of Penzance has been made since the year 1832; so that a debt of 500*l.*, due from the chapelry or

town of Penzance to the chapel-warden, &c., is still left unpaid. The only three rates which have been made during the last ten years were, in 1828, for 289*l.* 15*s.*; in 1830, for 191*l.* 7*s.* 4*d.*; and in 1832 for 287*l.* 3*s.* 10*d.*

There are several societies for religious purposes established in this district, the objects of which will be sufficiently shewn by their names. The number of members belonging to each cannot be stated, as it is difficult to determine what constitutes membership. The following 12 metropolitan societies have each a "Penzance Branch," with a secretary or other officer appointed to it: viz., the Society for promoting Christian Knowledge, the Society for propagating the Gospel in Foreign Parts, the Church Missionary Society, the Pastoral Aid, Prayer Book and Homily, Bible, Religious Tract, London Missionary, Wesleyan Missionary, Juvenile Wesleyan Missionary Societies, the Baptist Mission, and the Wesleyan Association Missionary Society for the promulgation of the Gospel at home and abroad. The three following are of a more local character, viz., the District Visiting Society for the spiritual and temporal relief of the poor, by which the offerings at the Sacrament in the Chapel of Ease are distributed; the Penzance Ladies' Bible Association; and the Wesleyan Religious Tract Society.

In the foregoing account of the town of Penzance, and the parish in which it is situated, Mr. Edmonds has not given any speculative opinion upon the social condition of the inhabitants. In the Queries put forth by the Statistical Society of London, the eliciting of such an opinion was studiously avoided; but the facts which the framers of those Queries sought to collect, and which Mr. Edmonds, with so much industry and ingenuity, has succeeded in collecting, convey a sufficient representation of the state of the district to enable any reader to form his own opinion upon the subject. As this account will probably attract some notice in the district, and other persons may possess further information relating to the Statistics of the town or neighbourhood, it may be well here to state that the Council of the Statistical Society of London will be glad to receive a copy of it, and if found of sufficient extent and importance, it will be published at some future time as an appendix to the above.

A complete Statistical account of the whole of the west division of the Penwith hundred (one of the extremities of England, and a tract of country altogether peculiar) would be very interesting; especially as there might now be added to it the accurate information obtained by Mr. De la Beche's geological survey. Perhaps the perusal of the preceding pages may suggest such an undertaking to persons residing in the district, or a Statistical Society for that purpose might be formed at Penzance, a place full of intelligence and possessing no ordinary degree of science. Falmouth, where there are already a Royal Polytechnic Society, and excellent agents for such a task, might follow the example; Truro and other towns might take up the scheme; and if Plymouth, &c., pursued it, a series of Statistical Societies might, ere long, be established, first embracing the sphere of De la Beche's recently published researches on the geology of Cornwall, Devon, and part of Somerset, and gradually extending throughout the length and breadth of the land.

Places of Public Worship.

PLACES of WORSHIP and DENOMINATION.	Date of Erection.	Number of Sittings.	Minister Resident, or not.	Number of Services.	Average Congregations.				Communicants.		Members of the Congregation.		
					On Sundays— a. Forenoon, b. Afternoon, c. Evening, d. Prayer- Meeting.		On Week-days— a. Prayer- Meetings.	Usual Proportion of Males to Females.	Average No.	Usual Proportion of Males to Females.	No.	Proportion of Males to Females.	
					On Sunday.	Week-days.							
IN PENZANCE.													
1. Church of England (Chapel of Ease). . .	..	2047	Yes.	2	2* a. 750 c. 850†	a. 130 b. 30	M. F. 3 to 5	90	M. F. 3 to 5			
2. Independents, or Congregational Dis- senter (Chapel). . .	1707; re-built, 1807.	450	Yes.	3	a. 300 c. 300 d. 45	a. 100 b. 35	10 to 11	30	Excess of F. 45	Excess of F. M. F. 4 to 5			
3. Wesleyan Methodist Society (Chapel, in Chapel Street). . .	1813	1350	No Itinerant.	4	a. 900 c. 1000 d. { 50 100	a. 700 b. 100	4 to 5	300	4 to 5	500			
4. Wesleyan Methodist Society (Chapel, in St. Clare Street). . .	1833	450	Ditto.	2	b. 300 c. 20	a. 50	Ditto.	Included in above.					
5. Baptist Church (Chapel)	1836†	400	Yes.	4	a. 200 c. 300 d. 55	a. 45 b. 25	Excess of F. 25	35	Majority F. 38	Majority F.			
6. Society of Friends (Chapel)	1803	150	No Ministers†	2	a. 20 b. 20	15	Equal.	No	Communion.	19 including Children			
7. Jews (Synagogue)	1807	50	Yes.	3	a. b. c. 25	Seldom 10	2 to 1	No	Communion.	14 Men excluding Women & Children.			
8. Primitive Methodist Connexion (School- Room, in North Street). . .	67	90	No Itinerant.	3	a. 100 c. 110 d. 30	a. 30 b. 20	Excess of M. on Sunday, Excess of F. on Week-days.	25	Majority F.	35	Equal.		

An Account of the Endowed Charities in Herefordshire. By JAMES WHISHAW, Esq., F.S.A. F.S.S.

[Read before the Statistical Society of London, on the 17th June, 1839.]

THE publication of the second part of the Thirty-second Report of the Commissioners of Charities has enabled me to lay before the Statistical Society, the following analysis and classification of the Endowed Charities in Herefordshire, the enquiry concerning which was taken during the latter part of the year 1836. Independently of the large aggregate amount of income derived from these Charities, which considerably exceeds that from similar endowments in several other counties of superior population and magnitude, there are some bequests amongst them, which, from their peculiar features and importance, well deserve the attention of all who take an interest in the welfare and happiness of the poorer classes of the community.

The total number of Charities in Herefordshire is 730, and their aggregate annual income 13,153*l.* 3*s.* 6*d.* This revenue is distributed among 185 out of the 221 parishes, of which the County consists; thus giving upon an average nearly four Charities, and about 71*l.* 1*s.* 11*d.* to each parish. The respective incomes of these Charities, which vary in amount, from 1*s.* 1*d.* (*Nicolett's* to *Cowarne Parva*), the lowest, to nearly 3000*l.*, (*Jarris's*, the particulars of which are given hereafter), the highest, are as follows:—

3	which amount to	£1,200	and are under	£3,000
7	“	200	“	450
8	“	100	“	200
12	“	50	“	100
43	“	20	“	50
65	“	10	“	20
91	“	5	“	10
344	“	1	“	5
157	“	1 <i>s.</i> 1 <i>d.</i>	“	1
730				

The general distribution of the aggregate income, and the number of Charities, with the amount applied under each particular head, are as undermentioned:—

	Number of Charities.	Income.		
		£.	s.	d.
1. Poor generally.	457	4,364	17	4½
2. Poor not receiving relief . . .	91	519	6	6½
3. Almshouses or Hospitals. . .	28	3,771	6	11
4. Schools and other purposes connected with education . . . }	91	3,528	12	3
5. Apprenticing	23	310	19	5
6. Repairs of Churches, and otherwise in aid of church rates . }	10	117	0	9
7. Clergymen for preaching sermons on particular days }	14	55	17	0
8. In aid of poor-rates	6	49	4	0
9. Miscellaneous.	10	435	19	3
Total.	730	13,153	3	6

Out of this aggregate income, the poor of the city of Hereford benefit to the extent of 2,061*l.* 0*s.* 10*d.*, which is made up and applied in the following manner:—

	£.	s.	d.
For poor generally.	262	3	10
„ poor not receiving relief. . . .	27	18	8
„ Almshouses or Hospitals. . . .	1,277	4	8
„ Educational purposes.	140	11	9
„ Apprenticing.	83	0	8
In aid of church rates.	15	16	0
To a Clergyman for a sermon. . . .	1	1	0
Miscellaneous.	253	4	3

I now proceed to give a more detailed account of the principal charities comprised under the above nine heads.

1. *Poor generally.*—The most considerable Charity under this head, and indeed one of the largest endowed charities in England, is *Jarvis's*, the particulars of which are as follows:—*George Jarvis*, Esq., of Weston Green, Thames-Ditton, Surrey, by his will, dated in 1790, gave to certain trustees 30,000*l.* upon trust, to invest the same upon government securities, and to pay the dividends of 11,000*l.*, part thereof, among such of the poor inhabitants of the parish of Stanton-upon-Wye, at such times and in such proportions, and either in money, provision, physic, or clothes, as the trustees should think fit, for the better support of such poor; and the dividends of 13,000*l.*, other part thereof, among the poor inhabitants of the parish of Bredwardine, in like manner; and the dividends of 6000*l.*, the remainder thereof, among the poor inhabitants of the parish of Letton, also in like manner. And he gave the residue of his property to his said trustees upon trust, to pay and distribute the same to the charitable purposes aforesaid, as they should think fit; but his will was that none of the said trust-monies should be appropriated in erecting any public or other buildings whatever. Mr. Jarvis died in 1793, and the validity of his charitable bequest was disputed in the Ecclesiastical Court by his daughter; but in 1795 the will was duly established and proved.

Soon after the donor's death a bill was filed in Chancery by the trustees against the executors, for payment of the legacy and the residue when ascertained, and for the direction of the court in the application thereof. Under a decree in the cause, dated 6th May, 1795, the legacy of 30,000*l.* was paid, and the residue ascertained, and the whole of the funds applicable to the said trusts were invested in different stocks, in the name of the Accountant-General.

The Master in Chancery to whom the cause was referred, by his Report dated 20th May, 1801, found that the funds provided by the donor, for the poor of the three parishes, had accumulated to, and then consisted of, the following sums, viz.—

£.	s.	d.	
66,715	2	9	3 per cent. Consols.
603	12	8	5 per cent. Annuities.
4,024	4	4	Bank Stock.
2,201	6	3	Cash in the Bank.

and that such funds would thereafter be increased by the dropping-in of annuities for lives given by the will, and for the payment of which certain funds had been appropriated.

It further appears by this report, that the trustees had laid before the Master a scheme for the management of the charity and the distribution of its income. The particulars of this scheme, which was approved of by the Master, whose report was subsequently confirmed, and the scheme directed to be carried into execution by the court, are stated at length in the Commissioners' Report; but it is sufficient for the present purpose to give the subjoined copy of the schedule appended to the Master's Report, wherein is set forth a summary of the scheme and proposals for expending the income of the charity.

The schedule details the proposed expenditure as follows:—

	For Bredwardine.			For Stanton-upon-Wye.			For Letton.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
For physic and attendance to the poor .	50	0	0	40	0	0	20	0	0
„ clothing, bedding, and bed-clothes	330	0	0	300	0	0	170	0	0
„ fuel	135	0	0	95	0	0	45	0	0
„ food, in the manner detailed in the } Master's Report	281	6	0	263	18	10	144	3	2
„ payments for schooling	60	0	0	50	0	0	25	0	0
„ payments to apprentice poor children	60	0	0	50	0	0	25	0	0
„ the proportion of a salary of an } agent or clerk	25	0	0	15	0	0	10	0	0
„ occasional gratuities to servants } and apprentices, who should con- } duct themselves well, and obtain } the approbation of their conduct }	61	14	0	34	4	8	23	0	0
Total	1,003	0	0	848	3	6	462	3	2

The funds of the charity have from time to time increased, in consequence of the falling-in of annuities and other circumstances, and in 1822 had amounted to 92,496*l.* 17*s.* 9*d.*, 3 per cent. consols, the annual dividends of which are 2,774*l.* 17*s.* 9*d.* The income has, therefore, been more than sufficient to carry into effect the charitable purposes according to the above scheme, and in consequence thereof a sum of 6,210*l.* 2*s.* 8*d.*, 3 per cent. consols, has accumulated, the surplus from time to time, having been invested in the funds; since January, 1833, no dividends had been received on the latter stock.

I will now give a brief account of the expenditure and distribution of the income of the charity, arranging the details under the different heads comprised in the foregoing schedule:—

Education.—The proportion of the income which is appropriated to education, and some particulars of the schools at Bredwardine, Stanton, and Letton, supported out of the funds of this charity, will be found under the proper head.

Food.—Wheat is distributed in Bredwardine and Letton twice a year. The quantity given is three pecks to each member of a family. In January 12 lbs. of beef are given to each person, and 4½ lbs. of mutton to each family, without distinction, every five or six weeks. In Stanton half a bushel of wheat is distributed to each person, also 10 lbs. of beef, in the same way as in Bredwardine, and 4½ lbs. of mutton to each family, every seven or eight weeks.

Fuel.—In Bredwardine each family receives 1 ton 10 cwt. of coals at the beginning of the winter, and also 100 faggots in the spring. In Stanton each family receives a ton of coals and also 100 faggots; and in Letton 2 tons 10 cwt. of coals, but no faggots.

Medicine.—The trustees, finding that the applications for medical assistance so very far exceeded the proportion ordered, resolved at a meeting held in February, 1835, that a surgeon should be appointed medical secretary, with a salary of 200*l.* per annum, and a residence free of rent and taxes, who should provide a dispensary, to be furnished with medicines from Apothecaries' Hall; and who should diligently attend the sick belonging to the charity in the three parishes, and superintend and be responsible to the trustees for the purchase of all goods, to be distributed according to the rules laid down for the conduct of the charity. This arrangement has since been carried into effect.

Apprenticing.—That portion of the income of the charity which is expended in apprenticing is placed under the appropriate head. The trustees, when the general conduct of a boy at a school has been good, pay for the indenture, and give 10*l.* premium to apprentice him.

Clothing.—In Bredwardine, Stanton, and Letton, each person is completely clothed, as occasion may require, discretion being used as to the articles most wanted. They are also provided with blankets, coverlids, feather-beds, and sheets.

Occasional Gratuities.—This part of the scheme has not of late been attended to, further than giving small rewards to the children attending the schools; but the trustees propose, in future, occasionally to give rewards to those servants who have been educated in the schools, and have kept their places longest with a good character.

The expenditure of the charity for the years 1834 and 1835 appears to have been as follows:—

	BREDWARDINE.		STANTON.		LETTON.	
	1834	1835	1834	1835	1834	1835
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Clothing	530 16 4	434 7 6	311 0 0	411 15 9	225 0 0	229 3 7
Food	302 18 4	291 3 9	223 3 4	219 10 8	132 18 6	134 14 8
Fuel	183 18 6	237 6 4	277 8 10	135 12 6	147 4 9	151 13 9
Medical Assistance	45 9 6	66 11 7	104 5 10	114 17 5	53 4 10	53 2 11
Schooling	85 18 1	106 4 9	102 1 8	139 15 8	33 3 3	49 4 9
Apprentices	40 0 2	30 0 0	2 16 6	24 7 4	15 0 2	56 10 10
Salary	18 15 0	31 5 0	11 5 0	18 15 0	7 10 0	12 10 0
Miscellaneous ...	6 9 0	5 18 6	4 4 10	4 3 0	2 14 0	2 4 2
Total	1,214 4 11	1,252 17 5	1,041 6 0	1,068 17 4	616 15 6	689 4 8

Total of the three parishes, in 1834, 2,872*l.* 6*s.* 5*d.*, and in 1835 3,010*l.* 19*s.* 5*d.*

The above statement shews that the expenditure for clothing, food, fuel, medical assistance, &c., for the three parishes, in 1835, amounted to 2,604*l.* 16*s.* 1*d.*, for education to 295*l.* 5*s.* 2*d.*, and for apprenticing to 110*l.* 18*s.* 2*d.*

The population of the three parishes being by the returns of 1831,

only 1,180, and the income arising from the charity nearly 3000*l.*, it must be obvious, as is observed in the Commissioners' Report, that under even the most judicious system of management, such a charity would be likely to be productive of considerable evils; and accordingly it appeared, at the time of the inquiry, that it had encouraged a spirit of discontent, with a disposition to idleness and improvidence, and had attracted to the parishes numerous persons from other districts, with the view of entitling themselves to a participation in the charity. With respect to the distribution of food, it appeared that on several occasions, as much as 120 lbs. of beef had been given at one time to a single family. In the clothing department of the charity also, an equally improper method had been pursued. The parties receiving the clothes, after procuring an order from the clerk of the trustees, were allowed to select the articles at their own discretion, without any restriction as to description or colour, by means of which all control over the disposal of the clothes was lost. In other branches of the charity similar abuses were found to have prevailed.

It is impossible to conclude the account of this important endowment without an expression of regret, that funds of such magnitude, and capable of producing so great an extent of practical and substantial good, should be turned to so little profit; and it is also to be regretted, that no larger proportion of its annual revenue than about 295*l.* should be applied to the excellent purpose of education.

Although in the majority of the Charities, which are placed under the head of "poor generally" the distribution is indiscriminate, yet there are among them many cases in which a selection of the objects is made, and by this means, "poor widows," "poor housekeepers," the "poorest parishioners," the "poor who attend church," the "poorest old people," the "indigent and deserving poor," the "religious and industrious poor," "poor single women," and "deserving single men," are the recipients of the incomes derived from particular bequests. In the instances of selection, however, poor widows are by far the most favoured objects.

The bounty is most frequently distributed in money; but there are many cases in which it is given away in the shape of bread; in several in clothing; and in a few in coals, blankets, meat, or flannel, &c.

There are some bequests under this head, which from the somewhat curious and whimsical directions attached to them by the donors, are deserving of notice. Thus—*Moses Edwards*, in his great admiration of the Reform Act, directed by his will that 5*l.* should yearly be paid out of his property in Hampton Bishop, to be laid out in coal, to be distributed among some poor persons of that parish yearly, on the anniversary of the passing of the Reform Act. He also gave a messuage and premises in Lugwardine, to his wife, and all his other hereditaments in that parish, to his great nephew, upon condition that the last-mentioned property should be subject to the yearly purchase of 50 tons of coals (afterwards altered by his codicil to 40*l.*, to be laid out yearly in coals for 10 years after his decease), to be distributed among poor persons of the parishes in the city of Hereford, and of 5*l.* worth of coals to be distributed among poor persons of the parish of Lugwardine, also upon the anniversary of the passing of the Reform Act.

Although these charges are void by the statute of mortmain, they are duly paid by the devisees named in the will, and the distributions of coal are regularly made among the poor of the specified parishes, on the appointed day.

In the parish of Woolhope a donation, *Winter's*, is reported, of 6s. 8d. a year to the vicar of Fownhope, during such time as the parishioners of that parish should maintain and keep in reparation, in the parish-church, a clock going and striking with a hand, the dial being outwards towards the highway, to declare to passengers and others the hours of the day and night, and during such time as they should likewise provide a bell-ringer, who should ring daily the day-bell, from the feast of the nativity of the Virgin Mary until the feast of the annunciation, yearly, at 4 o'clock in the morning and at 7 o'clock at night, at each of such times during the space of three quarters of an hour.

In the parish of Leominster, it is reported that *George Bayliss Cornwall* transferred the sum of 200*l.*, 3 per cents., into the hands of trustees in trust, to apply the dividends thereof to feed 60 poor house-keepers of the borough of Leominster, on every New Year's day; and that he afterwards founded a society in Leominster, composed of certain of the poor female inhabitants thereof, under the denomination of the "Leominster Female Society," and that he invested in the names of certain trustees several sums of stock in trust, to cherish and preserve the said female society for ever. It is recorded on a tablet in Leominster church, that the same donor secured 40 guineas upon a turnpike-trust, the interest to be applied "in support of the kitchen for ever."

In one parish there is a gift of "four dozen of sufficient bread;" and in three others, several small rent-charges are expended yearly in plain bread or bun-cakes, which are distributed at the churches amongst all the respective congregations on particular Sundays.

While upon this subject, though not immediately falling under the head of charities to the "poor generally," I should not omit to mention that in the parish of Peterchurch an acre of land, called "Dog Acre," has from time immemorial been appropriated to the use of a person for keeping dogs out of the church.

2.—*Poor not receiving relief*.—The largest charity falling under this head is *John Smith's*, for the poor of Clifford. It has been in Chancery for several years past, and, owing to the dilatoriness of the parties who have had the conduct of the proceedings, the poor of Clifford had not, at the time of the enquiry, received any benefit from the charity since January, 1820.

According to a scheme for the appropriation of its surplus income, approved by a Master in Chancery, (whose report upon the subject has since been confirmed by the Court,) 60*l.* a year is to be expended in fuel for such of the poor of Clifford as are not in the receipt of parochial relief; besides which, the surplus, after providing certain annual sums for school purposes, apprentice-fees, &c., is to be laid out by the trustees in clothing and bedding to be given among the same description of poor. The total annual sum likely to be applicable to the relief of the poor in the above manner is 138*l.* 6s. 3d.

In 13 charities only out of the 91 embraced by this head is a selection of the recipients made, and in those cases the preference appears to be given to housekeepers and widows.

The incomes arising from this class of donations seem to be generally given away in money; but in 11 cases they are expended and distributed in bread, coals, and clothing.

3. *Almshouses or Hospitals.*—By the aid of this sum of 3,771*l.* 6*s.* 11*d.*, 170 poor persons are wholly or in part maintained and clothed in the endowed almshouses of this county, at an average expense of 22*l.* 3*s.* 7*d.* each. The most important and interesting facts relating to all these establishments are given in the subjoined tabular statement. Of the 170 alms-people, 79 are men and 91 women, and among the latter are 39 widows.

Locality.	Name of Hospital or Almshouse, with the Date of Foundation.	Income.	Description and Number of Almspeople Maintained.
Hereford .	St. Ethelbert's, 1230 (<i>a</i>) .	£. s. d. 158 19 6	10 Men and Women.
	Lazarus, or Sick-man's .	19 0 0	6 Widows.
	St. Giles's (<i>b</i>)	94 18 4	5 Men.
	Trinity, 43 Eliz. (<i>c</i>) . .	233 2 0	3 Unmarried Men, and 12 Widows.
	Williams's, 1601	314 8 6	6 Men.
	Price's, 9 Car. 1 (<i>d</i>) . .	422 1 4	12 Men.
	Symonds's, 1695	8 0 0	4 Men.
	Weaver's, 1641	23 15 0	5 Women.
	Lingen's, 1609 (<i>e</i>) . . .	30 0 0	6 Widows.
	Coningsby's, 1617 (<i>f</i>) . .	200 0 0	A Chaplain and 10 Old Servitors, as they are called, 4 of whom are old soldiers, and the remainder decayed serving men.
Ross . .	Mrs. Price's, 1636	15 0 0	6 Widows.
	Webbe's, 1612 (<i>g</i>) . . .	87 15 0	7 Poor Parishioners.
	Rudhall's, 1575	5 13 10	3 Men and 2 Women.
	Perrock's, 1613	2 16 4	4 Poor Parishioners.
Ledbury .	St. Catherine's, founded by Hugh Folyot, Bishop of Hereford, in 1232 (<i>h</i>)	1720 13 9	10 Men and Women, who are directed to be taken from the places where the Bishop of Hereford, or the Dean and Chapter, have possessions, and 5 at least from Ledbury.
Bishopston	The Hospital founded by Ann Berrington, in 1710	43 7 6	5 Women not receiving parish relief.
Wellington	Nott's, 1625	6 17 0	3 Old Men.
Pembroke	Perrott's, 1682	19 4 2	6 Men.
	Duppa's, 1637	40 0 0	5 Old Widows, and an infirm Old Maid.
Leominster	Trafford's, 1686 (<i>i</i>) . . .	39 10 0	6 Women, and 2 Men.
Peterchurch	Hester Clark's, 1736 . .	24 4 8	4 Widows.
Kingston .	John Smith's, 1722 (<i>k</i>) .	119 4 0	6 Aged Women.
Kingston .	Hoskyns's, 1712 (<i>l</i>) . . .	27 0 0	4 Men.
Foy . .	Abrahall's, 1640	7 16 0	3 Poor Parishioners.
Ludford .	Sir Job Charlton's, 1672 (<i>m</i>)	63 0 0	6 Poor and Impotent Persons.
Bromyard .	Phineas Jackson's, 1681 (<i>n</i>)	41 0 0	7 Women.

OBSERVATIONS.

(a) This Hospital appears to have been founded and endowed by the Dean and Chapter of Hereford, with funds obtained by the sale of indulgences, and the contributions of pious and charitable people in different parts of the kingdom.

(b) The Report states the income to be 84*l.* 0*s.* 4*d.* ; but, as there is a considerable sum received every now and then for fines, the actual income is fully equal to the annual expenditure, which is mentioned to be 94*l.* 18*s.* 4*d.* The Hospital is stated, on the authority of Leland, to have been founded in 1290.

(c) It appears that the regular expenditure of this charity also exceeds the income, but the fines on renewal supply a sufficient sum to meet the annual expenses.

(d) There is a sum of 100*l.* in the 3 per cent. consols, the gift of Alderman Cox, the dividends of which are applied to the use of the widows of such poor men as happen to die in Price's Hospital.

(e) This Almshouse was founded and endowed by Mrs. Jane Shelly, who directed that it should be called Lingens's.

(f) Six of the Servitors were to be old soldiers of three years' service at least in the wars, if so many should be thought fit and eligible, in the counties of Hereford, Worcester, and Salop. The appointment of the Servitors is in the owner of the Hampton Court estate in Herefordshire.

(g) Besides the income here stated, which is derived from an estate belonging to the charity, it is also possessed of a sum of 70*l.* deposited in the Ross Savings' Bank.

(h) This Hospital, when completed, will accommodate twenty-four inmates. The right of appointment is vested in the Master, who is one of the canons residentiary of Hereford Cathedral. In addition to a comfortable dwelling, the almspeople receive 6*s.* a week each in money, and a further sum of 1*l.* 2*s.* every quarter-day, 4*lbs.* of meat, and half a pound of butter per week, a ton of coals annually, and a suit of clothes once in 2 years.

(i) The almspeople are also entitled to an additional sum of 1*l.* a year, the gift of the founder's widow.

(k) According to a scheme for the appropriation of the surplus income of this charity, approved by a Master in Chancery (whose Report has since been confirmed by the Court), each of the almspeople is to be paid 7*s.* a week, and is also to have every year 10*l.* worth of fuel and clothing.

(l) Two of the almspeople are directed to be selected from the poor of the parish of Dore, and the other two from this parish.

(m) The enquiry as to this charity was taken in 1830; it is probable, therefore, that the income, which is principally derived from land, is now larger than that here set down.

(n) The observation in the preceding note is equally applicable to this charity, which was enquired into in 1824. The almshouse itself does not appear to have been given by Mr. Jackson, but it is without any pecuniary endowment, except what arises under his will.

4. *Schools and other purposes connected with Education.*—This head is so important, and the subject of it so generally interesting, that I have deemed it expedient to give a rather full account of every endowment for education the income whereof amounts to, or exceeds, 20*l.* From a perusal of these details, it will be observed that, except in the cases of the Kington and Lucton schools, which are really valuable foundations, the instruction given at the different schools is of a very common-place description, being almost exclusively confined to reading, writing, and arithmetic; and in several instances to reading only. The number of children who are instructed by the aid of such of the school-charities enumerated, as were in operation at the time of the enquiry, is 1,428. The Report does not in all cases distinguish the proportion of girls and boys, but from what I can collect, the above aggregate includes about 327 of the former, and 1,101 of the latter. The incomes of the charities belonging to this class which are below 20*l.*,

are applied for educational purposes in a variety of ways. Thus, in many cases, they are given to the schoolmasters or schoolmistresses of common parish schools, for instructing a limited number of children in reading only; in some for teaching reading and writing; and in a few instances reading, writing, and arithmetic. In other cases the incomes are contributed to the general funds of parish schools, and in a few instances, to those of National, Sunday, and inferior village schools.

The following are the particulars referred to of the education charities, whose respective incomes amount to 20*l.*:—

BODENHAM. *Mason's School*.—Income 30*l.* This school is conducted upon the National System. The number of children in attendance is from 40 to 50, who are taught reading, writing, and arithmetic; and the girls sewing also.

BOSBURY. *Free Grammar School*.—The rent arising from the property belonging to this foundation is 90*l.* The charity appears to have been greatly abused. It has been in Chancery for many years; and at the time of the enquiry there were neither master nor scholars; and a large sum seemed to be due from the charity for costs on account of the proceedings in Chancery.

BREDWARDINE. *Jarvis's School*.—The annual sum appropriated to this parish for education, from *Jarvis's Charity*, appears to be 106*l.* 4*s.* 9*d.* There are from 50 to 70 children in attendance at the school, who are taught reading, writing, and arithmetic, and the girls knitting and sewing also. This, as well as the schools at Stanton and Letton, supported out of the funds of the same charity, is conducted upon a plan similar to that of the National Society.

BRILLEY. *Harris's and Morris's School*.—Income 50*l.* In respect of this money, with 5*l.* a year paid by the parish, and the use of a residence adjoining the school-house, the schoolmaster instructs all the poor children of the parish in reading and writing, free of expense. The number thus taught is generally about 80.

BROMYARD. *Grammar School*.—Income 36*l.* 14*s.* 11½*d.* This school is considered as free to all the children of the town and parish: but it seems that very few take the benefit of it; those who do attend are instructed in reading, writing, arithmetic, and English literature, for which they pay a consideration. The enquiry in this case was taken in 1824.

CLIFFORD. *Charity School*.—Income 66*l.* This school was established by the aid of voluntary contributions; and in a scheme for the appropriation of the surplus income of *John Smith's Charity*, approved by a Master in Chancery, (whose report upon the subject has since been confirmed by the Court,) it is proposed to endow it with 66*l.* a year, 50*l.* of which is to be paid to the schoolmaster, and the remainder applied in the purchase of books, fuel, and other necessary articles for the school and school-room.

COLWALL. *Walwyn's Free School*.—Income 35*l.* 6*s.* 8*d.* The number of boys in attendance is 60. The instruction is limited to reading, writing, and arithmetic, and is altogether gratuitous. This school is stated to have acquired a high reputation, and to be of incalculable value to the parish.

CRADLEY. *Turner's Charity School*.—Income 20*l.* The average

number of boys in attendance is 20. The description of instruction given is not stated.

DORSTONE. *Free School.*—Income about 45*l.* This school is open to all poor children belonging to the parishes of Dorstone, Clifford, and Michaelchurch. They are taught reading, writing and arithmetic, free of charge. The average number of children in attendance is 48.

EARDISLAND. *The Free School*, founded by William Whittington in 1607.—Income 49*l.* 7*s.* At this school from 70 to 100 children are taught reading, writing, and arithmetic, and the girls sewing and knitting also.

EATON BISHOP, and other parishes. *Goff's Free School.*—*Edward Goff* (the founder of the school at Huntington), by will dated 24th April, 1813, gave all the residue of his personal estate to certain trustees upon trust to dispose of the same for the benefit, or for the promotion, or establishment, of any free school or schools in Herefordshire, or any contiguous counties, for the education of poor children.

Pursuant to the directions of this will, the trustees have established free schools in the parishes of Eaton Bishop, Fownhope, Linton, Peterchurch, and Walford, in this county; and in the parishes of Ragland, Monmouthshire; Tenbury, Worcestershire; and Pontesbury and Oswestry, Shropshire. In each of these parishes a school-house and a residence for a schoolmaster have either been built by the trustees, or provided by the inhabitants of the neighbourhood of the school. The schoolmasters are selected by the trustees from that class of Dissenters denominated Baptists. Each master is paid a salary of 50*l.* a year, and has a residence rent-free.

The schools are open to all poor children without distinction, and without limitation to the particular parish in which each school is situated.

The children are instructed in reading, writing, and the four first rules of arithmetic, free of all charge. The number of children attending the schools varies according to the season of the year, the attendance in the winter and spring being much larger than that in the summer and autumn.

The number in attendance at and on the books of each school in October and November 1836, was as follows:—

Situation of School.	In Attend- ance.	On the Books.
Eaton Bishop	37	60
Fownhope	57	68
Linton	73	75
Peterchurch	52	65
Walford (Lay's Hill) . . .	49	56
Ragland	45	49
Tenbury	30	50
Pontesbury	40	46
Oswestry (Sweeney Mountain)	74	146
Total	457	615

A Sunday school is attached to each establishment, which the children may attend or not, as they please. Service is also performed in the

school-rooms by the schoolmaster twice every Sunday, after the business of the Sunday school is completed; during which service the children are at liberty to be present or not, and they are also at liberty to go to the Established Church, or any other place of worship their parents may prefer.

HEREFORD. *Dean Langford's Gift*.—Income 38*l.* 13*s.* 4*d.*, for scholarships for 4 scholars of the free school at Hereford, born within that city. In respect of this charity 4 boys at the cathedral school receive 22*l.* 13*s.* 4*d.* in money and clothes, the money being 14*l.* 2*s.* 8*d.*, and the clothes of the value of 8*l.* 10*s.* 8*d.* In addition to this the master receives 8*l.* 8*s.* for educating them. The boys on the foundation, who are called Langfordines, are nominated by the Dean and Chapter.

Roger Philpotts's Charity, is for the maintenance of 2 of the 4 Langfordines at Brazenose College, Oxford. The income, which was originally only 10*l.*, is now 100*l.* 8*s.* 5*d.* The reason assigned for this extraordinary increase in the funds was the absence of applications to be admitted on the foundation, which has probably arisen from ignorance of the fact that such a charity exists, and not from a disposition to decline the advantages which it offers. The only disbursements which have been made from the funds of the charity since 1790 are as follows:—

In 1830 two exhibitions,	£35 each,	£70
1831	“	70
1832	“	70
1833 one exhibition	. . .	35
Total . . .		<u>£245</u>

HUNTINGTON. *Goff's Free School*, founded in 1792.—Income 118*l.* All poor children born of indigent parents in this parish, the adjoining parishes, or elsewhere, are admitted into this school, upon the nomination of the trustees; and are taught reading, writing and arithmetic, free of charge. The number of children who annually attend the school is from 60 to 70. The schoolmaster, who is an Independent minister, performs service in the school-room every Sunday, and also at other times in the week; but the children are neither required nor expected to attend it, being, in regard to religion, left altogether to the control of their parents.

KINGTON. *Lady Hawkins's Free School*, founded in 1619.—Income 224*l.* 10*s.* This school is open to all boys born in the parishes of Kington, Huntington, and Brilley, in Herefordshire, and in the parish of Michaelchurch, in Radnorshire, having their parents inhabiting therein, upon payment of the entrance-fee.

The school is conducted by the master, who is a clergyman and graduate of Oxford, with the aid of an usher. The number of scholars is 74, viz., 50 free scholars, and 24 foreigners, or boys taken from parishes beyond the prescribed district. They are all instructed in English, in the Latin Classics, and in history, geography, and mathematics. The Church catechism, and the elements of Divinity are also taught them.

The admission and “quarterage” fees now payable are regulated by a recent order. Those paid on the admission of free scholars are as follows, viz., for the poorer sort, 5*s.*; for tradesmen's and farmers' sons,

10s.; and for gentlemen's sons, 1*l*. The quarterage-fees paid by foreigners are of the same amount. Each boy taught writing and arithmetic is charged half-a-guinea a quarter.

Independently of a large proportion of the rents of the charity property, and of the entrance and quarterage fees, the master receives from another charity in the parish a rent-charge of 10*l*. for delivering a lecture in the parish-church every alternate Sunday afternoon.

LEDBURY. *Mrs. E. Hall's Charity School*.—Income 7*l*. 11*s*. 10*d*. 15*l*. of this is paid to the master of a National school, and the remainder is applied to support a girls' school containing from 20 to 24 scholars, who are taught reading, writing, and arithmetic, with sewing, knitting, &c.

LEINTWARDINE. *Free School*, founded and endowed by the Hon. Edward Harley, in 1659.—Income 41*l*. 1*s*. The average number of children in the school is from 40 to 50, the poorer portion of whom are taught reading, spelling, writing, and accounts free. The others pay 6*d*. a week for writing and accounts.

LEOMINSTER. *Free Grammar School*, founded by Queen Mary, in 1554.—Income 20*l*., which is regularly paid to a schoolmaster, appointed by the Corporation; but no children have been educated in respect of it for several years past. The office is, in fact, a complete sinecure.

LETON. *Jarvis's School*.—The annual sum appropriated to this school from *Jarvis's Charity*, appears to be 49*l*. 4*s*. 9*d*. The number of children in attendance is about 40, who are given the same kind of instruction as those at the Bredwardine and Stanton schools.

LUCON. *The Free School*, founded by John Pierrepont, in 1708. Income 1,245*l*. 0*s*. 4*d*. The boys to be elected to this school, which, in extent of income and general importance, is the principal one in the county, are, by the rules and orders for its government, to be taken from the parishes, hamlets, and townships of Lucton, Croft, Yarpole, Bircher, Luston, Eyton, Kingsland, Shobdon, and Aymestrey, all in Herefordshire; and at the time of their election, must be able to read distinctly the Lord's Prayer, the Creed, the Ten Commandments, and a chapter in the New Testament. The rules and orders further provide, that such boys shall be of two sorts; first, of such whose parents are of the meaner sort of people, who shall not have in their own right lands above the yearly value of 20*l*. according to the parish rate or rent, or otherwise manage at the same time lands of above the yearly value of 50*l*.; the number of this sort shall not exceed 50 at one time; and they shall be educated in all the learning of the school they shall be capable of, or that shall be fit for them, without any fee or reward. As to the second sort of boys, it is declared, that they shall not exceed 30 at any one time, and shall be such whose parents have not lands of their own above the yearly value of 50*l*., nor yet shall rent lands which, with their own, are above the yearly value of 300*l*.; and such children shall be educated in all the learning of the said school they shall be capable of, or that shall be fit for them. and pay a settled fee of 20*s*. by the year.

The boys of the first class are, in number, 50; the vacancies are filled up half-yearly by the assistant-governors. They are educated gratuitously, and receive each one suit of clothes in the year: they are

admissible between the ages of 7 and 10, and if they are to be apprenticed, are not permitted to remain in the school beyond 15; if, however, they should be candidates for an exhibition they may continue until 18. These last remarks apply also to boys of the second class, with this difference, that they may be admitted at any age not exceeding 14. It is required that all boys who are apprenticed from the school shall have attended it four years. Boys are recommended for apprenticeship, at the discretion of the assistant-governors, for the term of 5 or 7 years, and a premium of 10*l.* is paid with each apprentice. An exhibition of 5*l.* per annum for 4 years is given every alternate year, if there be a candidate duly qualified. The exhibitors are allowed to enter at any college in Oxford or Cambridge.

Of the second class of boys there are 22. They pay 1*l.* annually for their schooling, and are not clothed. Great difficulty seems always to have been experienced in keeping up the statutable number (30) of these boys. This has induced the governors of late years to sanction the admittance of candidates, qualified in other respects, into the second class, without making any inquiry into the circumstances of their parents, inasmuch as it appears to have been the intention of the founder that this branch of the charity should be rendered extensively useful.

The master is permitted to take 25 boarders; the present number is 21, seven of whom belong to the second class; they are chiefly the sons of gentlemen and clergymen, and are educated either for the University or for professions.

There is a school library, to the support of which those boys, who desire to make use of it, contribute by an annual payment of 5*s.*

The school is conducted by the head master, who is a clergyman and a graduate of Oxford or Cambridge, with the aid of a classical assistant, who teaches also mathematics, writing, and arithmetic.

The school consists of two departments, the *Classical* and the *English*. The parents are permitted to choose to which of these divisions their sons shall belong, and to have them transferred from the one to the other.

The *Classical department* comprises the master's boarders and some of the day scholars. The studies of these boys are especially directed to the attainment of the following objects: an intimate acquaintance with the Holy Scriptures, and with the doctrines of the Established Church, a critical knowledge of the English, Latin, Greek, and French languages, and such a familiarity with geography, arithmetic, and mathematics, as will render these sciences practically useful.

The *English department* includes all those boys whose parents do not wish them to receive a classical education. These constitute a majority of those on the foundation. The great object, as respects this portion of the pupils, is to ensure to them a sound religious education, in conformity with the principles of the Church of England. They are likewise instructed in the English language, in writing, arithmetic, and in the other outlines of history and geography. Such boys as make the requisite advance in their studies, proceed to geometry and mensuration.

At the conclusion of each half-year, the assistant-governors meet at the school-house, for the purpose of recommending boys for admission

and apprenticeship, of instituting a general examination into the state of the school, and of transacting such other business connected with the charity as may come before them. Minutes of their proceedings are drawn up and forwarded to the Governors, together with the diary and report of progress furnished by the master.

PEMBRIDGE. *Carpenter's Schools*.—Income 80*l.* 17*s.*; of which 30*l.* is derived from *Bengough's Gift*, and the remainder from *Carpenter's Charity*. The funds are applied in supporting a boys' and a girls' school. The schoolmaster of the boys' school has 50 boys on his list; and the average attendance is from 16 to 30. He instructs any poor children sent by the minister and churchwardens, in reading, writing, and arithmetic, upon the plan of the National Society's Schools. In the girls' school there are 50 on the list, and the average attendance is 40—they are also instructed in reading, writing, and arithmetic, upon the same plan; together with knitting, spinning, and plain sewing.

ROSS. The *Blue Coat School*, founded pursuant to the will of Walter Scott of Hornsey, Gentleman, dated 1786.—Income 222*l.* 2*s.* 8*d.* There are 30 boys and 30 girls in the schools, who are taught reading, writing, and arithmetic, the girls plain work also, and all of them the grounds and principles of the Christian religion. They are likewise all clothed from the funds of the charity.

STANTON-UPON-WYE. *Jarvis's School*.—The annual sum appropriated to this school from *Jarvis's Charity* seems to be 139*l.* 15*s.* 8*d.* The number of scholars is from 60 to 80, who are given the same kind of instruction as those at the Bredwardine and Letton schools.

STOKE LACEY. *Lilly's School*.—Income 20*l.* The number of scholars is 43, who are taught reading, and the girls sewing and knitting in addition.

WEOBLEY. The *Free School*, founded by William Crowther, for the teaching of such children as should be born in the parishes of Weobley and Wormesley, and the village of Wootton, in the parish of King's Pion. Income 21*l.* 2*s.* 9*d.* 15 boys—viz., 3 from Wormesley, 2 from Wootton, and 10 from Weobley—are taught reading, writing, and arithmetic.

5. *Apprenticing*.—The following are the four principal charities comprised under this head:—

Harper's, in Hereford; Income, 47*l.* 6*s.* 8*d.*—The number of children annually apprenticed is not stated. The premium given with each is 10*l.*

Jarvis's, in Bredwardine, Stanton, and Letton; Income, 110*l.* 18*s.* 2*d.*—This is the sum which would seem to be appropriated annually, from the income of the charity, to apprenticing boys from the three parishes.

John Smith's, in Clifford; Income, 35*l.*—Proposed to be given from the funds of this charity for apprentice-fees, for annually placing out, as apprentices to some trade or calling, two boys and one girl, who shall have been educated at the Clifford charity school.

Mrs. F. Scudamore's, in Llangarran, Garway, and Kentchurch; Income, 28*l.* 4*s.* 5½*d.*—It would appear that the proportions of this part of the income of the charity, distributed to the respective parishes, have been very unequal in amount. The premium given with each apprentice is 10*l.*

6. *Repairs of Churches, &c.*—24*l.* 12*s.* 6*d.* of this sum of 117*l.* 0*s.* 9*d.* was originally destined for the poor of three different parishes: by carrying it, therefore, to the credit of the church-rates, the poor of those parishes are deprived of the money intended for their benefit.

7. *Clergymen for preaching sermons, &c.*—The principal item of which this 55*l.* 17*s.* is composed, is 27*l.*, which, with the exception of 1*l.* given to the clerk, is paid to a clergyman for delivering a weekly lecture at Bromyard.

8. *Poor-Rates.*—No less a proportion than 35*l.* 7*s.*, of the 49*l.* 4*s.* carried to the account of the poor-rates, was expressly given for the benefit of the poor *not* receiving relief.

9. *Miscellaneous.*—Two small sums out of the 435*l.* 19*s.* 3*d.* are applied as follows, viz.—

	£.	s.	d.
For the expenses of monthly Sacraments in two parishes	3	5	0
Paid to the Minister of a meeting-house	2	10	0
	<hr/> £5 15 0 <hr/>		

Particulars of the remainder are given in the subjoined tabular statement, which contains an account of the other seven charities included under the present head:—

Locality.	Name of Charity.	Income.	For what purpose given, and how applied.
		£. s. d.	
Hereford .	Tomson's	118 15 5	For 12 poor, in money, bread, and clothing, and for apprenticing, and pricking church music.
„	Howell's	52 0 0	40 <i>l.</i> for 10 poor maids, and the remainder for 16 poor women.
„	Dr. Cope's	40 0 0	For 10 old maidens, or single women of virtuous character.
„	Brydges's	40 8 10	For salaries to Chaplains, for praying and preaching to prisoners in the county and city gaols.
„	Lord Scudamores's .	157 0 0	For buying materials and utensils for setting the poor to work, and for employing them in any manufacture, trade, or business, and for apprenticing them.
Ledbury .	Anthony Biddulph's .	12 0 0	For the repairs of monuments in Ledbury church, and for providing bibles and prayer-books for the children at the school.
Hom Lacy .	Hon. Mrs. Scudamore's	10 0 0	For the Minister who should perform service every Sunday, and administer the sacrament three times a year in the chapel of Amberley.

Besides the numerous charities whose incomes are given in the Commissioners' Report, and which form the subject of the preceding part of this paper, there are several bequests of bread, clothing, wheat, &c., the annual value of which is not stated.

The following is a brief account of them :—

The Canon's Dole.—4,360 loaves are annually distributed from the funds of the cathedral. The names of the parishes which receive the bread, and the number of loaves sent from the Canon bakehouse at Hereford to each of them are as follows :—

City Parishes.—St. John's, 440 loaves ; All Saints, 400 ; St. Martin's, St. Nicholas's, St. Owen's, and St. Peter's, each 300 loaves.

Country Parishes.—Fownhope, Lugwardine, and Woolhope, each 100 ; Allensmore, Canon-Pyon, Holmer, Kingston, Madley, Marden, and Norton Canon, each 80 ; Blakemore, Breinton, Clehonger, Dinedor, Eaton-Bishop, Preston-on-Wye, Wellington, and Withington, each 60 ; Upper and Lower Bullingham, each 50 ; Huntington, Hampton-Bishop, Moreton, Pipe, and Tupsley, each 40 ; Preston-Wynne, 20 ; and Pitman, 14.

The remainder of the bread is distributed among the prisoners in the gaols, and certain persons holding appointments in the cathedral.

In the parish of Kingston, (*Donor unknown*,) 6 coats and 6 gowns, made of grey woollen cloth and linsey-woolsey, are given away annually to 6 aged and deserving poor men, and 6 aged and deserving poor women, being housekeepers and parishioners.

In the parish of Almeley, 4 bushels of wheat made into bread (the gift of a former rector) are distributed on Easter-eve to every householder in the parish, rich or poor.

In the parish of Eardisland, (*Donor unknown*,) 13 bushels of wheat are annually distributed among the poor.

In the parish of Byford, (*Donor unknown*,) a piece of land was given to find bread and wine for the sacraments of the parish. Sir John Cotterell is the present owner of this land, and finds the bread and wine.

In addition to the above-enumerated charities, whose annual value is not stated, there are several alms-houses and school-houses in the different parts of Herefordshire without any endowment. It is proper to state also that the city of Hereford is one of the 24 corporations entitled to participate in the charity of Sir Thomas White, which was founded for the purpose of granting loans of 25*l.* each, for 10 years, without interest, to young freemen of the corporations mentioned in the foundation instrument.

I should not omit to mention, in this place, a charity left for the poor of Ross, which, although not yet in operation, is, from its magnitude, deserving of notice. The name of the donor is James Baker, who, by his will, dated in 1835, gave several legacies and annuities to certain persons therein named, and subject thereto, he gave all the residue of his money, securities, and personal estate, including the money or stocks set apart to answer the annuities as they should respectively determine, to the churchwardens and overseers of Ross upon trust, twice in every year, or oftener, to distribute the interest and dividends thereof, in clothing, fuel, and food, among the poor inhabitants of the parish of Ross not receiving alms. It is stated that the fund to be ultimately distributed among the poor of Ross, from this charity, will amount to 20,000*l.* or 25,000*l.*

The aggregate amount of charity-money in this County, which, owing to the negligence, malversation, or insolvency of the parties to whom it

was entrusted, is now wholly lost, is as follows: viz., in legacies, 4,102*l.*, and in rent-charges and other annual sums, 79*l.* 15*s.* 2*d.*; 695*l.* of the former of these sums, and 1*l.* 10*s.* of the latter, were left for the poor of the city of Hereford. Of the total amount, 553*l.* in legacies, and 1*l.* 15*s.* in annual sums, were given for educational purposes.

Besides the money donations which are lost, there are several alms-houses, pieces of land, &c., the benefit of which has long been denied to the objects for which they were intended. Proceedings in Chancery, however, are now in progress for the recovery of some of them; but with what prospect of a successful result I am not able to state.

Having in a former paper (published in the first volume of the Journal, p. 153) given a table, compiled from the most recent Parliamentary documents, which shews the extent of property applicable to educational and other charitable purposes in 18 counties in England, I now subjoin similar particulars with regard to 8 additional counties in which the enquiries of the Commissioners of Charities have since been completed and reported:—

COUNTIES.	Population in 1831.	Income for Education.			Income for other charitable purposes.			TOTAL.		
		£.	s.	d.	£.	s.	d.	£.	s.	d.
Cornwall . . .	300,988	982	12	2	2,678	10	7	3,661	2	9
Derby . . .	237,170	5,381	8	10	10,131	18	8	15,513	7	6
Devon . . .	494,478	6,578	5	3	22,370	6	7	28,948	11	10
Hereford . . .	111,211	3,528	12	3	9,624	11	3	13,153	3	6
Oxford . . .	152,156	1,972	16	7	12,618	8	8	14,591	5	3
Somerset . . .	404,200	8,413	0	2	33,909	9	1	42,322	9	3
Worcester . . .	211,365	7,816	14	1	12,540	1	3	20,356	15	4
York . . .	1,335,997	22,210	15	6	63,621	3	2	85,831	18	8
Total . . .	3,247,565	56,884	4	10	167,494	9	3	224,378	14	1
Total of the 18 counties enumerated in the former Paper	4,848,144	83,064	16	11	220,603	12	4	303,668	9	3
Total . . .	8,095,709	139,949	1	9	388,098	1	7	528,047	3	4

On the Sickness and Mortality among the Troops in the United Kingdom. Abstract of the Statistical Report of Major Tulloch.
Prepared by J. W. C. LEVER, Esq., F.S.S.

[Read before the Statistical Society of London, 20th May, 1839.]

IN order to investigate the precise extent of sickness and mortality among the troops in this country, it was necessary, first, to examine the medical returns from each corps, in order to ascertain the number of admissions and deaths which took place in the regimental and detachment hospitals, and the diseases by which they were caused; secondly, the Chatham returns, for those who died under treatment there; and, lastly, the annual regimental returns furnished to the War-Office, for the deaths which took place suddenly, or on furlough; and as the last series of these returns was essential in order to arrive at accuracy,

the Report is necessarily confined to the 7 years subsequent to January, 1830, when they were first established. The observations are principally confined to those regiments of Cavalry which have not been serving abroad during the period embraced in the Report, and to the Household Troops, whose service is for the most part confined to the Metropolis.

The Report is divided into several heads, the first embracing the medical and statistical details of the Dragoon Guards and Dragoons; the second, those of the Foot Guards only; and the third, those of the Royal Horse Guards and Life Guards, to which is appended, for the purpose of comparison, some details regarding the mortality and diseases among the depôts of Infantry Corps serving in the West Indies.

As the troops are better lodged, better fed, and have less onerous duties to perform, than the great mass of the labouring population; as, moreover, they are carefully selected, and, so far as can be ascertained, are subject to no physical defect at enlistment, while their profession during peace involves no danger nor hardship, it might be expected that their sickness and mortality would be much lower than among persons engaged in the occupations of civil life. This, however, is not the case; for in the Dragoon Guards and Dragoons the average strength for $7\frac{1}{4}$ years was 6,166; the admissions into hospital 5,725, and the deaths 87. The ratio per 1000 of mean strength admitted was therefore 929, and of the deaths 14. But to the latter must be added, deaths by accident and violence (viz., by suicide 35, murdered 4, drowned 14, and other accidents 6), amounting to 59, or $1\frac{3}{10}$ per 1000 of the strength annually; the average of which, added to 87 by disease, makes the total mortality 95, or $15\frac{3}{10}$ per 1000 annually. This, however, is rather an unfavourable estimate; for during two of the seven years the cholera added considerably to the mortality, and in 1833 and 1836 the influenza was unusually prevalent, cutting off many, and, in others, laying the foundation of pulmonary complaints, which afterwards proved fatal. It is therefore probable that, in other years, the ratio of mortality among this class of troops would be about 2 per 1000 less than the preceding estimate.

The mortality in the Prussian army, on an average of ten years from 1821 to 1830, was $11\frac{7}{10}$ per 1000 annually, but that army is entirely composed of young men between 20 and 25, whilst our troops are for the most part above that age. The mortality in the French army, on an average of six years from 1820 to 1826, amounted to $19\frac{5}{10}$ per 1000 annually; but this may probably include the deaths in corps serving in the Colonies.

Before comparing this rate of mortality with that which prevails among the civil population of the kingdom, it is necessary to ascertain the average age of soldiers, in order that a comparison may be made with civilians at the same period of life. Out of the whole force of Dragoon Guards and Dragoons, it was found that nearly one-third were between 18 and 25 years of age; another third, between 25 and 33; and the remaining third, of various ages between 33 and 40; with the exception of a few boys under 18. The average age of this class of troops is therefore from 29 to 30. By the Carlisle tables, the number annually dying out of 1000 persons of that age would be about 10:

and by Mr. Finlayson's observations, deduced from the duration of life among the Government annuitants, the number is about 13; if, therefore, we take the mean, viz., 11·5 per 1000, we shall find it to correspond very nearly with the ratio deduced from the population returns. Comparing this with the rate of mortality previously ascertained, we find that the proportion of deaths is at least one-third higher among these troops than among an equal number of civilians of the same age. This, at first sight, indicates that the military profession operates prejudicially on the health and constitution of its members; but it may in some degree be explained by the great difference between the mortality in the towns, where the troops are generally quartered, and that in the rural districts; in comparing, therefore, the mortality of military with that of civil life, it is necessary to take for our standard of comparison, not the average of the whole kingdom, but of those towns in which the troops are generally quartered, and where the density of the population is found to operate so prejudicially on health. By examining the necessary data procured from Chester, Leeds, Bolton, Bury, Preston, Wigan, Bradford, Stockport, Macclesfield, York, Hull, Norwich, Plymouth, Portsmouth, Liverpool, Glasgow, and London, it is found that the annual average mortality of 1000 persons between the ages of 15 and 20 is 8; between 20 and 30, 16; between 30 and 40, 18; and between 40 and 50, 21. Thus while the mortality among the Dragoon Guards and Dragoons (supposing the medium age to be 30) has been $15\frac{3}{4}$ per 1000, that of the civil population in the same towns, even between the ages of 20 and 30, has been 16 per 1000—a sufficient evidence that the apparent high ratio among the troops, arises not so much from any deteriorating influence in their profession, as from the disadvantage under which they labour, of being subject to the insalubrious atmosphere of densely populated districts.

We have next to ascertain whether the duties of the military profession at home entail a greater degree of sickness on the troops than usually falls to the lot of the civil population. We have already seen that the admissions into hospital among the Dragoon Guards and Dragoons amounted, on the average of the last seven years, to 929 per 1000 of the mean strength annually: as a general rule, therefore, every soldier is in hospital, for some disease or other, once in every thirteen months. This ratio is probably rather too high, on account of the influenza having twice prevailed as an epidemic during the period. Comparing, however, this with the data obtained by the Factory Commissioners from the Government Dock-yards, we find that out of 6,276, the average number of men annually employed, 2,552 are annually attacked by sickness—the ratio per 1000 being 407. This estimate is rather above than under the average among the working classes throughout the United Kingdom, although from this calculation hurts and injuries received during labour have been omitted in the Returns from the Portsmouth Dock-yard. These are said to amount to 150 per 1000 of the mean strength annually. The striking disproportion between the average of sickness among the Dragoon Guards and Dragoons, and the workmen in the Government Dock-yards, arises from the circumstance that among the troops every case of disease, however slight, is entered in the hospital-book on admission; whereas in the Dock-yards, and among

workmen generally, only those cases are recorded which entirely disable the individuals for labour. This explanation is borne out by the fact that, while the number of attacks of sickness in the Dock-yards was 407, the deaths amounted to 15, per 1000 of the strength. Hence one in 27 of those attacked died; whereas, among the Dragoon Guards and Dragoons, although there were 929 attacks out of every 1000, the deaths from disease were but 14, or 1 in 66 of those attacked. Again, if we investigate the different classes of diseases by which the admissions among the troops have been occasioned, we shall find that out of a total of 41,464 no less than 26,344, or nearly two-thirds of the whole, were of that class which seldom prove so serious as to incapacitate a person for the labour of civil life, and for which, were it optional on the part of the soldier, he would probably never have submitted to the confinement of an hospital.

The large proportion of suicides among this class of the military deserves particular attention. Out of a total of 686 deaths, no less than 35, or upwards of 1 in 20 of the whole, have arisen from this cause alone, independent of many attempts which did not prove fatal: whereas, among persons insured in the "Equitable," the proportion is only 1 in 110 of the deaths. It will be interesting to compare the tendency to self-destruction in the army with the proportion of suicides in civil life, in different countries, as stated by Quetelet:—

In Russia	} There is 1 suicide annually to	49,182	} inhabitants.
Austria		20,900	
France		18,000	
State of Philadelphia . . .		15,875	
Prussia		14,404	
State of Baltimore		13,656	
,, Boston		12,500	
,, New York		7,797	
Dragoon Guards and Dragoons of the United Kingdom . .		1,274	

In cities where a large proportion of military are quartered the ratio of suicides is greater than in the whole population of a country, but still much below that among our troops. In the department of the Seine (Paris), between 1817 and 1825, the suicides averaged annually 1 in 2,400 inhabitants; in Berlin, from 1813 to 1822, 1 in 2,941; in Geneva, from 1820 to 1826, 1 in 3,900; and in London, 1 in 5,000 inhabitants. Assuming, therefore, the very highest average in civil life in this country, suicides are at least five times as numerous among this class of the military. At the same time we must bear in mind that instances of self-destruction rarely occur among persons under the age of 18, and are by no means so frequent among females as males, which circumstances must materially influence any comparison between its prevalence among a population of all ages and sexes, and a select body of troops from 18 to 40 years of age.

Foot Guards.—The medical returns not being all sufficiently minute in their details, the usual particulars with regard to the number of admissions cannot be furnished. The total strength of the Foot Guards, for $7\frac{1}{4}$ years, was 34,538; the number of deaths 745; the average strength 4,764; and the average deaths 103. The mortality per 1000 of the strength annually was therefore $21\frac{1}{5}$, or nearly one-half higher than

among the Dragoon Guards and Dragoons. This is the more remarkable, as the climate of London is not more insalubrious than many of the other great towns; the average annual mortality of the civil population between the ages of 20 and 40 being under 15 per 1000, and that of the East India Company's labourers as low as $12\frac{1}{2}$ per 1000, at the same period of life.

From the returns of the Metropolitan Police Force, notwithstanding all the disadvantages of frequent night-duty, to which that class of men is exposed, the mortality, out of an average strength of 3,400 constantly employed, has been but 30 per annum, being under 9 per 1000; in addition to which, nearly the same proportion has been invalidated for bad health. Many, however, leave the service of their own accord, if they find it proving injurious to their constitution.

The principal diseases to which this high ratio of mortality is attributable are diseases of the lungs, amounting to 14.1 per 1000 of the mean strength; whereas the mortality from diseases of the lungs, among the Dragoon Guards and Dragoons, amounts only to 7.7 per 1000 annually of the mean strength. The ratio of deaths from all other diseases, or causes of death, is 7.5 per 1000 in the Foot Guards, and 7.6 per 1000 in the Dragoon Guards and Dragoons. That this high ratio of mortality does not arise from residence in the metropolis, appears from calculations deduced from the London Bills of Mortality from 1830 to 1835; for out of 1000 deaths among the civil population, the number from diseases of the lungs was 328, scarcely one-third of the whole, while, out of 745 deaths among the Foot Guards, no less than 487, or upwards of two-thirds were from these diseases. But a much more conclusive proof is, that the Household Cavalry, which is also quartered in the metropolis, evinces no such peculiarity. The total strength of the Household Cavalry, for $7\frac{1}{2}$ years, was 8,649 men, the total number of deaths for the same period was 125. The average annual strength was 1,193, the annual deaths 17; therefore, the ratio of deaths per 1000 of the mean strength was 14.5. It will be seen that the mortality is not so high by at least one-half as among the Foot Guards, and even lower, by a small fraction, than among the Cavalry Corps employed throughout the kingdom. Among the Household Cavalry the annual ratio of deaths per 1000 of the mean strength from diseases of the lungs is 8.1, that of the Foot Guards being 14.1. This difference cannot arise from the Foot Guards being in a greater degree exposed on night-duty, for among the troops of the line serving at home, and whose constitutions have been deteriorated by residence in tropical or unhealthy climates, the mortality by diseases of the lungs is much lower. This is strongly exhibited by comparing the mortality among the dépôts of corps serving in the West Indies, which may be supposed to be higher than the average among infantry in this kingdom. The average annual mean strength of these dépôts is 3,246, the annual deaths 60; therefore the ratio of deaths per 1000 is 18.5, while that of the Foot Guards is 21.6. In comparing this mortality with that in the Foot Guards, the most unfavourable specimen of the troops of the line is taken, among whom, in years of ordinary health, the ratio at home does not exceed 15 per 1000, which is found to have been the average among all the troops in Ireland during a period of 32 years. The mortality

among the dépôts from diseases of the lungs was 9·6 per 1000 of the mean annual strength. These dépôts, however, appear to have suffered twice as much from fever as the Cavalry or Household Troops, but most probably many of the deaths occurred among men who had previously suffered from the same cause in the West Indies.

General Results.—Having thus ascertained the fatal diseases among the four different classes of troops serving in the United Kingdom, as well as among a select body of individuals in civil life, we may draw a fair standard for estimating the relative mortality by the same diseases among troops in the Colonies.

Fevers.—The proportion of deaths which occur annually, by this class of diseases, approximates very nearly in all the above classes of troops except the last.

	Per 1000 of Strength.
In the Dragoon Guards and Dragoons it was ascertained to have been	1·4
Household Cavalry	1·6
Civil Life	1·6
Foot Guards	1·7
West India Dépôts	2·8

Excluding the last, for the reason already stated, and taking the average of the four others, 1·6 per 1000 may be computed to die annually from fever. The admissions were about 75 per 1000 annually, and the proportion of deaths to admissions appears to be about 1 in 55.

From an extensive series of observations it appears that, among troops serving in this kingdom, fevers are more prevalent during the summer than the winter months, in the proportion of 5 to 4. Of 4,499 attacks, 2,531, or 56 per cent., occurred between May and October; and only 1,968, or 44 per cent., during the rest of the year. In 1832 and 1834, however, the preponderance of febrile cases was in those months which in other years were most exempt from them. In civil life in this country, fevers are more prevalent in summer, but more fatal in winter.

Eruptive Fevers.—This class of diseases, once such a prolific source of mortality, is now of very rare occurrence in the army, the proportion being as follows:—

	Per 1000 of Strength.	
In the Dragoon Guards and Dragoons	$\frac{1}{10}$	or 1 in 10,000
Household Cavalry	$\frac{2}{10}$	„ 2 „
West India Dépôts	$\frac{2}{10}$	„ 2 „
Foot Guards	$\frac{3}{10}$	„ 3 „

Taking the average, it may be estimated that two-tenths per 1000, or 2 out of every 10,000, of the troops die annually from this class of diseases.

The admissions amount to 3 per 1000 annually, and the proportion of deaths to admissions is 1 in 15.

Diseases of the Lungs.—If the mortality in the Foot Guards, which must be considered an exception, be excluded from the comparison, the loss in the other corps by this class of diseases, approximates so nearly, that there is little difficulty in fixing an average.

	Per 1000 of Strength.
In the Dragoon Guards and Dragoons it amounts annually to	7·7
Household Cavalry	8·1
West India Dépôts	9·6
Foot Guards	21·6

As some part of the excess in the West India depôts may probably be attributable to the climate of the West Indies, which has a much greater tendency to induce consumption than that of this country, we may assume that the average mortality from diseases of the lungs throughout our army, exclusive of the Foot Guards, is about 8 per 1000 annually. The ratio of admissions is 148 per 1000, and the proportion of deaths to admissions may be estimated at 1 in 19. Of the fatal cases of diseases of the lungs, nearly four-fifths arise from consumption, being as many as from all other causes in the army at home.

The highest estimates in civil life rate the mortality from this disease at one-seventh of the deaths at all ages; or, if the observation be confined to adults alone, it may possibly amount to one-fourth part, which, at the utmost, is only half as high as among the troops.

Diseases of the Liver.—This class of diseases is of very rare occurrence, and productive of but little mortality, among our army in this country.

	Per 1000 of Strength.	
In the Foot Guards the annual ratio of deaths is .	$\frac{1}{10}$	or 1 in 10,000
West India Depôts	$\frac{1}{10}$	,, 1 ,,
Civil Life	$\frac{3}{10}$	,, 3 ,,
Dragoon Guards and Dragoons	$\frac{4}{10}$	,, 4 ,,
Household Cavalry	$\frac{5}{10}$	,, 5 ,,

We may assume 3 in 10,000, the ratio in civil life, as the standard of mortality. The ratio of admissions is about 8 per 1000 annually, and the proportion of deaths to admissions 1 in 18.

Diseases of the Stomach and Bowels.—The mortality from these diseases has been as follows:—

	Per 1000 of Strength.	
In the Household Cavalry the annual ratio of deaths was	$\frac{3}{10}$	or 3 in 10,000
West India Depôts	$\frac{4}{10}$	,, 4 ,,
Foot Guards	$\frac{7}{10}$	,, 7 ,,
Dragoon Guards and Dragoons	$\frac{8}{10}$	,, 8 ,,
Civil Life	$\frac{8}{10}$	,, 8 ,,

We may therefore take the average of the whole at about five-tenths per 1000, or 5 in 10,000, annually. The admissions amount to 94 per 1000 annually, but only 1 in 131 cases proves fatal. Out of 1,649 attacks, of which the dates have been recorded, 649 were in August, September, and October, being twice as many as the average of the other months of the year.

Epidemic Cholera.—The estimate of mortality by this disease is calculated upon the aggregate strength of the seven years, as if it had occurred annually. In this case the proportion of deaths caused by it annually would have been—

Of Dragoon Guards and Dragoons	1·2 per 1000 annually.
Foot Guards	1·2 ,,
West India Depôts	1·2 ,,
Household Cavalry	1·3 ,,

During the three years that this disease prevailed, about 2·8 per 1000 of the strength were annually cut off by it. This epidemic seems to have exerted its fatal influence in all localities with undeviating regularity; for we have here instances of different bodies of troops quartered

in various situations throughout the kingdom, and yet the proportion of deaths is within a fraction the same in all; but it did not prove equally fatal to all classes, the mortality having increased progressively with the advance of age, as is shewn by the following table:—

AGES.	Aggregate Strength of Cavalry and Household Troops during the 3 Years in which Cholera prevailed.	Deaths by Cholera in that Force during the 3 Years.	Annual Rate of Mortality by Cholera at each Age.
Under 18	548	..	..
18 to 25	14,103	32	2.3
25 „ 33	13,336	33	2.5
33 „ 40	7,223	29	4.
40 „ 50 and upwards	2,229	11	4.9
Total	37,439	105	2.8

Of 171 treated for this disease among the Dragoon Guards and Dragoons, 54 died, or about one-third of the whole number attacked. Among the other troops the proportion was much the same.

Diseases of the Brain.—In this class of diseases the results have been very uniform, and are as follows:—

	Per 1000 of Strength.	
In the West India Depôts there died annually.	$\frac{6}{10}$	or 6 in 10,000
Dragoon Guards and Dragoons	$\frac{7}{10}$	„ 7 „
Household Cavalry	$\frac{9}{10}$	„ 9 „
Foot Guards	1.	„ 10 „

Assuming eight-tenths per 1000, or 8 in 10,000, as the standard of the annual extent of mortality, it is found to be only half the proportion which occurs in civil life, as shewn by the “Equitable” tables. The proportion of admissions was about 6 per 1000 of the strength annually, and the proportion of deaths to admissions was 1 in 9.

Dropsies.—The results in this class of diseases also approximate very nearly. They are as follows:—

	Per 1000 of Strength.	
In the Dragoon Guards and Dragoons there died annually.	$\frac{3}{10}$	or 3 in 10,000
Household Cavalry	$\frac{3}{10}$	„ 3 „
West India Depôts	$\frac{4}{10}$	„ 4 „
Civil Life	$\frac{4}{10}$	„ 4 „
Foot Guards	$\frac{5}{10}$	„ 5 „

Four-tenths per 1000, or 4 in 10,000, is assumed as the standard. The proportion of admissions is little more than 1 per 1000 of the strength, and the deaths are about 1 in 4 of the admissions.

Of the number constantly Sick in Hospital among Troops serving in the United Kingdom.

From the abstract of the average number daily sick in each regiment of Dragoon Guards and Dragoons, it appears that the number constantly sick is only about 37 per 1000 of the force, but making allowance for the omissions caused by there being no returns of the sick in detachments having no medical officer in charge, we may increase the average to 40 per 1000. This corresponds with the result of 24 monthly musters in 1823 and 1824, referred to by Mr. Finlayson in his evidence on Friendly Societies. From these results, combined with the information previously referred to in regard to the number of admissions, we can

ascertain the average period each soldier is sick in the course of the year, and the average duration of each attack of sickness. 40×365 shews the total days of sickness among 1000 soldiers, = 14,600, which is about $14\frac{1}{2}$ days to each soldier. Dividing 14,600 by 929, the number of admissions into hospital, we have 16 days as the average duration of each attack of sickness.

On the Influence of Age upon the Mortality of Troops serving in the United Kingdom.

From the following table, shewing the aggregate strength of the Dragoon Guards and Dragoons at each age, in returns of 7 years, as well as their total deaths at each age, we find that the mortality increases progressively with the advance of age, but not so rapidly as in the West India stations. The numbers under 18 are too low to warrant any further conclusion than that they corroborate former results as to the comparative exemption from mortality of persons at that early period of life.

AGES.	Aggregate Strength at each Age, in Returns of 7 Years.	Total Deaths at each Age, in Returns of 7 Years.	Annual Ratio of Deaths per 1000 Living at each Age.
Under 18	455	2	4.4
18 to 25	15,320	213	13.9
25 , , 33	15,919	222	14.
33 , , 40	8,549	148	17.3
Above 40	2,920	78	26.7
Total	43,163	663	15.3

It will be found that the mortality among this class of troops increases with the advance of age, in nearly the same proportions as in civil life.

The following table shews the influence of age on mortality among the Foot Guards:—

AGES.	Aggregate Strength at each Age, in Returns of 7 Years.	Total Deaths at each Age, in Returns of 7 Years.	Annual Ratio of Deaths per 1000 Living at each Age.
Under 18	490	3	6.1
18 to 25	11,778	263	22.3
25 , , 33	12,470	280	22.5
33 , , 40	6,637	118	17.7
Above 40	2,035	56	27.5
Total	33,410	720	21.6

It will thus be seen that the mortality falls in a much higher proportion on soldiers between 18 and 25, and 25 and 33, in the Foot Guards than in the Dragoon Guards and Dragoons, while between 33 and 40, in both forces, the mortality is nearly equal. This may arise from a larger proportion being annually discharged for disabilities in the Foot Guards than in the Cavalry; therefore, the few who are left above 33 must be more select in the former than in the latter. The increased ratio of mortality in the Foot Guards between 18 and 33 cannot depend upon the mere influence of climate, as we find on examination of the London Bills of Mortality and the returns of the East India Company's labourers.

AGES.	Died annually per 1000 of Living.	
	By London Bills of Mortality.	By Returns of East India Company's Labourers.
From 20 to 30	12.2	8.2
„ 30 , , 40	16.9	14.8
„ 40 , , 50	25.4	24.3

Nor does it depend upon the extent of night-duty; as in the Metropolitan Police, who have more severe night-duty to perform, neither the mortality nor the invaliding is half so high as in the Foot Guards. In the Household Cavalry the mortality increases progressively with the advance of age, except between 18 and 25, when it is a little higher than at the succeeding period of life, as is shown by the following table:—

AGES.	Annual Ratio of Deaths per 1000 Living at each Age.	
Under 18	8.4	Average 14.5.
18 to 25	14.7	
25 „ 33	11.4	
33 „ 40	16.3	
Above 40	22.8	

On the Influence of the Seasons in producing Sickness and Mortality among the Troops in the United Kingdom.

The returns of the Household Troops not being sufficiently minute in their details, the investigation has comprised only the Dragoon Guards and Dragoons during a period of seven years. The total number of admissions was 39,461, viz., 15,202 by acute diseases, 3,679 by chronic diseases, and 20,580 by surgical diseases. The month in which there was the greatest number of admissions was August; the other months follow in the annexed order, July, May, September, June, and October—being the six hottest months;—then December, January, April, March, February, and November. The total number of deaths was 499, viz., 264 by acute diseases, 193 by chronic diseases, and 42 by surgical diseases. The greatest mortality occurred in May. The other months follow thus—April, August, March, July, November, December, and September (equal), January and October (equal), June and February. The omissions in the deaths, as stated in the Medical Returns, compared with the War Office Returns, are no less than 164, or nearly one-fourth of the whole number. A great portion of these consists of men who have died, on furlough, of chronic diseases, principally consumption, or from accidents.

Of every 1000 admissions and deaths from acute diseases only, among the Dragoon Guards and Dragoons, the number occurring in each month was—

	Admissions by Acute Diseases only.	Deaths by Acute Diseases only.		Admissions by Acute Diseases only.	Deaths by Acute Diseases only.
January. .	85	68	July. . .	88	91
February .	76	49	August . .	107	110
March . .	71	80	September .	93	98
April . .	77	72	October. .	81	83
May. . .	88	117*	November .	70	76
June . .	84	80	December .	80	76
			Total .	1000	1000

It will thus be seen, that notwithstanding the large proportion of diseases which are attributed to the changeable nature of this climate, the smallest number of attacks of sickness among the troops occurs during the fogs and gloom of November, and through the winter they

* In May the deaths were raised above the usual average by the prevalence of cholera among the troops during that month in 1833.

are considerably under the average; while during the months of July, August, and September, the proportion of sickness attains its maximum. April and May prove peculiarly fatal to chronic cases among the troops in this kingdom; but at least nine-tenths of these are from consumption. It might be supposed that these results are influenced by the furloughs which commanding officers are permitted to grant between the 1st November and 10th March, to the extent of 10 per troop or company; but by the returns of January last, which may be assumed as a fair average, only $2\frac{1}{2}$ per cent. of the Cavalry force, and 5 per cent. of the Infantry, were absent on furlough.

Whatever may be the causes which give such an unhealthy character to the autumnal season, they operate no less powerfully in the French army than in our own; but they seem to be a month later in coming into action, and continue for a month longer than in this country. This may arise from a difference in the periods embraced in the return, according to the time to which they are made up. According to M. Quetelet, the autumnal months, instead of being, as in the army, the most fatal, are, in civil life, the reverse, at those periods of life corresponding to the average ages of our soldiers.

It has been stated by Mr. Edmonds, in his paper "On the Sickness and Mortality of London Artisans," that the minimum quarterly sickness was in the three months, May, June, and July; and that the maximum quarterly sickness was in the three months, January, February, and March—the maximum being to the minimum in the proportion of 4 to 3.

If there exists that difference in the liability to disease at the same seasons, between the military and civil population of the same city, as these various returns would lead us to suppose, there must be some secret agency which has hitherto eluded detection. To the medical man, therefore, who ought to be the preserver as well as the licensed restorer of the public health, we must look, to determine the nature of that influence which the statistician has proved to exist.

Statistics of the Tin-Mines in Cornwall, and of the Consumption of Tin in Great Britain. By JOSEPH CARNE, Esq., F.R.S., &c.

THE commencement of tin-mining in Cornwall lies far beyond the period of authentic history; but for ages, and even perhaps until within the last two or three centuries, all the Cornish tin was produced, either from diluvial ores (known by the name of stream-tin) or from deposits (either in veins or in floors*) near the surface. The word *mining* can only be applied to the latter, in which all the operations must have been open to the sun. There are in different parts of Cornwall many extensive chasms which bear evidence to this early mode of mining. The number of people employed in these operations must have been very small in comparison with the number required to produce the same quantity of tin-ore on the present system of mining, and the consumption of articles, now so necessary in mining operations, must have been very limited.

* Horizontal beds, usually connected with veins.

It must be evident, that the quantity of diluvial ores would be gradually reduced, as these deposits were discovered without extensive research, and the ore was obtained at comparatively small expense.

It would answer no purpose at present to go through the different stages and periods of mining for tin. The information given in Sir Charles Lemon's paper on the Statistics of the Copper-mines,* relative to the advance of mining with respect to machinery, economy, &c., will apply to tin-mines as well as those of copper, and the mines which he has enumerated, with the number of people employed in them, comprise tin as well as copper-mines. I can, therefore, offer only a few general remarks applicable to the tin-mines and the tin-trade separately.

Until the latter part of the seventeenth century, all the tin produced in Cornwall, whether from streams or mines, was smelted in blast-furnaces with charcoal. It was not until the former part of that century that pit-coal had been successfully applied to the smelting of any of the metals. The decrease of wood in Cornwall, and the consequent increasing expense of smelting tin with charcoal, naturally induced the tanners to turn to any substitute, and to try the use of pit-coal. This was probably the immediate cause of the erection of air (reverberatory) furnaces, in which the fuel and the ore were separated, and culm-coal (possessing much of the properties of charcoal) mixed as a flux with the ore.

I believe the first air-furnace for smelting tin was erected about the year 1680; since that period nearly all the mine-tin of Cornwall has been smelted in air-furnaces.

With respect to the produce of the tin-mines, I cannot go back further than the year 1750; and from that year until the close of 1837 the account is complete.

No. 1.—*Produce of the Tin-Mines of Cornwall in each Year from 1750 to 1837.*

Years.	Tons.	Years.	Tons.	Years.	Tons.	Years.	Tons.
1750	2,876	1772	3,159	1794	3,351	1816	3,348
1751	2,273	1773	2,852	1795	3,440	1817	4,120
1752	2,550	1774	2,453	1796	3,061	1818	4,066
1753	2,516	1775	2,619	1797	3,240	1819	3,315
1754	2,724	1776	2,652	1798	2,820	1820	2,990
1755	2,757	1777	2,770	1799	2,862	1821	3,373
1756	2,774	1778	2,515	1800	2,522	1822	3,278
1757	2,752	1779	2,678	1801	2,365	1823	4,213
1758	2,720	1780	2,928	1802	2,668	1824	5,005
1759	2,637	1781	2,610	1803	2,960	1825	4,358
1760	2,717	1782	2,546	1804	3,041	1826	4,603
1761	2,395	1783	2,570	1805	2,785	1827	5,555
1762	2,584	1784	2,685	1806	2,905	1828	4,931
1763	2,736	1785	2,885	1807	2,465	1829	4,434
1764	2,618	1786	3,399	1808	2,371	1830	4,444
1765	2,757	1787	3,204	1809	2,548	1831	4,300
1766	3,055	1788	2,352	1810	2,036	1832	4,323
1767	2,850	1789	3,405	1811	2,385	1833	4,065
1768	2,667	1790	3,193	1812	2,373	1834	2,989
1769	2,898	1791	3,470	1813	2,324	1835	4,228
1770	2,977	1792	3,809	1814	2,611	1836	4,054
1771	2,823	1793	3,202	1815	2,941	1837	4,790

* Journal, Vol. I., p. 65.

From this it appears, that for 35 years after 1750 there was no increase in the produce; and that, if the average of the last ten years be compared with that of the first ten years, the increase is only about 64 per cent.: and even by a comparison of the last year (which exceeded several previous years) with the first, the increase in 88 years has been only 75 per cent., whilst the quantity of copper in the same period has increased from about 1,500 to upwards of 10,000 tons, or about 600 per cent.

From an old document, I am enabled to state the price paid for tin to the tanners in Cornwall for upwards of 40 years from 1746:—

No. 2.—*Average Prices of Tin paid to the Tinner in Cornwall in each Year from 1746 to 1788.*

Years.	Per Cwt.		Years.	Per Cwt.		Years.	Per Cwt.		Years.	Per Cwt.	
	s.	d.		s.	d.		s.	d.		s.	d.
1746	60	0	1757	59	0	1768	69	0	1779	60	0
1747	62	0	1758	56	6	1769	69	0	1780	61	3
1748	63	4	1759	56	0	1770	68	0	1781	64	3
1749	63	9	1760	56	0	1771	64	6	1782	70	0
1750	65	0	1761	60	0	1772	61	0	1783	70	0
1751	65	0	1762	64	6	1773	53	9	1784	70	0
1752	67	0	1763	69	0	1774	55	0	1785	70	0
1753	68	0	1764	69	0	1775	60	0	1786	72	0
1754	67	9	1765	69	0	1776	59	6	1787	72	0
1755	66	3	1766	69	0	1777	59	6	1788 began at 72s.		
1756	62	3	1767	69	0	1778	60	6	and fell to 58s.		

Average of 12 years to the end of 1787, 64s. 4d.

In the year 1786 the quantity produced suddenly increased upwards of 500 tons above that of the preceding year, and this increased produce continuing, and a large importation of Banca tin into Holland having taken place in 1787, the price in 1788 fell from 72s. to 58s., and it would probably have fallen still lower had not a new and unexpected market been opened. This was no other than the East Indies.

Mr. George Unwin, a purser of an East India ship, had in 1787, as an adventure, taken some tin from the Malacca Isles to China, and made a handsome profit by his speculation. On his return to England, having learned the price of tin in Cornwall, he brought the subject before the East India Company, and made it appear to them that, at the low price of Cornish tin, it might be sent to China as cheap as the Dutch could send their Malacca tin thither. In 1789 the East India Company purchased and sent out a small quantity, which fully answered their expectations; upon which they entered into arrangements with the tanners of Cornwall for an annual supply. This exportation to India speedily advanced the price in Cornwall; but the Cornish, having found the benefit of such a connection, were not easily induced to relinquish it. An artificial system was therefore created, by which the East India Company were still supplied, although their price was lower than that paid to the tanners in Cornwall, whilst the price in the home market was kept high enough to make up the deficiency. By this system the quantity delivered to the East India Company had always reference to the produce of the mines and the demand at home, this varying from 500 to 1500 tons per annum, and the average price of tin in Europe was, in consequence, much higher than it otherwise would have been.

The price first paid by the East India Company was 68*l.* 13*s.* 4*d.* per ton, delivered on board their ships in London. In 1792 it was advanced to 71*l.*, and on the renewal of their Charter, about that period, they agreed to take as much as 800 tons annually at 75*l.*, and a further quantity of 400 tons (should the Cornish wish to sell it) at 68*l.* 13*s.* 4*d.* These prices continued until 1809, when the difference between 75*l.* and the price of the home market was so great, that the Cornish refused to sell any more unless the price were advanced, and in 1810 none was exported to India. In 1811 the Company advanced the price to 78*l.*, and in 1812 to 80*l.* The system however became more and more difficult to maintain, and in 1817 this connection with the East India Company terminated, and only a few small parcels were afterwards exported to India.

With these remarks I propose, in order to give a general idea of the prices of tin at different times, and the amount in money which it produced, to divide the 88 years, of which I have given the produce (1750 to 1837), into three distinct periods, the second of which embraces the years during which the exportation to India continued.

No. 3.

First Period, 39 years, from 1750 to 1788 inclusive. This period comes down to the commencement of the exportation to India.

The quantity produced was 107,536 tons, of which the average price was 64*s.* 6*d.* per cwt. Amount paid to the tinner . . . £6,936,072

Average per annum, 2,757 tons . . . £177,847

Second Period, 28 years, from 1789 to 1816 inclusive. This includes the whole period in which the exportation to India continued (with trifling exceptions).

	Tons.		Per Cwt.	
The quantity produced was	80,501.			
Sold to the East India Company	20,711.	Net price	64 <i>s.</i> 2 <i>d.</i>	} £. 7,204,839
Remainder	59,790.	Price in London	98 <i>s.</i> 4 <i>d.</i>	
Average price, 89 <i>s.</i> 6 <i>d.</i> per cwt.				

But as this was the price in the market, the duty on the whole (with fees) amounting to 4*s.* 6*d.* per cwt., the expense of delivery and sale of 59,790 tons, perhaps 3*s.* per cwt., and the merchant's profit, perhaps 3*s.* more on the whole, must be deducted. The price paid to the tinner in Cornwall, will be then about 79*s.* 9*d.* per cwt.

Average per annum, 2,875 tons at 79*s.* 9*d.* (or in round numbers 80*s.*) . . . £230,000

Third Period, 21 years, from 1817 to 1837 inclusive.

	Tons.	
The quantity produced was	88,434	
Two small sales to the East India Company . . . }	440	Sold at 65 <i>s.</i> , net price 55 <i>s.</i> 8 <i>d.</i>

Remainder	87,994	,, 84 <i>s.</i> , with the	} £7,416,000
same deductions as in the last period			
The average per annum will be	4,211 tons.	at 73 <i>s.</i> to the tinner	} £307,400

There are now three kinds of tin made in Cornwall, viz., grain-tin, refined tin, and common tin.

Grain-tin was formerly made solely in blast-furnaces, only from the diluvial tin-ores, or what is generally called stream-tin, remarkable for its superior purity.

It was the only kind of tin used for making tin plates (or rather for tinning the plates of iron), on account partly of its fluidity, and partly of its superior colour and lustre. It was also used, in small quantities, in dyeing scarlet and in making tinfoil.

The price was much higher than that of common tin. I have known it 20s. to 30s. per cwt. higher.

Grain-tin has lately been almost wholly made in reverberatory furnaces, like other tin, but still generally from diluvial ores, although mixed, in a small degree, with the very purest mine ores. This cheaper mode of manufacture has greatly reduced the price.

Nearly 40 years ago, when scarcely enough grain-tin could be procured for the use of the tin-plate manufacturers, the tin-smelters, by selecting particular ores, commenced making tin of such a quality as was quite fluid enough for tin plates, although not of so fine a colour; which was used for the first coat on the iron plate, and grain-tin for the second (for all the plates are dipped twice in the tin). This is called refined tin, and its quality has been so much improved, (although still it is not equal to grain-tin,) that by most of the tin-plate manufacturers no other tin is now used. There are a few, however, who still use grain-tin for the outer coat of the plate.

Common tin is made from the mass of the tin-ores of Cornwall.

I have annexed a statement of the quantities of grain-tin and other tin made in the 20 years ending with 1837. By the old Stannary laws, the grain-tin was always entered in the Duchy books separately from the other tin, and it was thereby easy to ascertain the quantity made; but as the refined tin has never been distinguished in this way from the common, it is impossible to get at the exact quantity. It has, however, been gradually increasing, and it is supposed that at present the grain and refined tin together amount to nearly one-half of the whole.

No. 4.

Refined and Grain Tin.			Refined and Common Tin.		
Years.	Tons.	Tons.	Years.	Tons.	Tons.
1818	660	3,406	1831	240	4,060
1819	325	2,990	1832	236	4,087
1820	306	2,684	1833	216	3,849
1821	394	2,979	1834	244	3,745
1822	377	2,901	1835	267	3,961
1823	423	3,790	1836	296	3,758
1824	494	4,511	1837	259	4,531
1825	321	4,037			
1826	265	4,338		6,509	77,805
1827	311	5,244			
1828	314	4,617	Average about } 1/3 part . . }	325	3,890
1829	246	4,188			
1830	315	4,129			

The relative prices of the different kinds of tin are now :—

Superior grain for dyeing, &c.	99	} Per Cwt.
Tin-plate grain.	94	
Refined ditto	89	
Common ditto	82	

The name grain-tin appears to have been given to it from its quality of granulating. This is done by placing a block of it in a furnace-kettle,

and heating it as high as it will bear without melting; it is then raised by a pulley to a considerable height, and suddenly dropped on a hard surface, by which it becomes instantly divided into small striated masses, to which the name *grains* has been given.

As contradistinguished from this, the other tin was formerly called *block-tin*, but this distinction has long been disused.

The quantity of grain-tin now consumed in dyeing, and in making tin-foil, is nearly, if not quite, 200 tons per annum.

The prices of tin in the home market, for the twenty years ending with 1837, were as follows:—

No. 5.—*Price of Tin in the Home Market in each Year from 1818 to 1837.*

Years.	Common Tin in London.		Refined Tin in Wales.		Years.	Common Tin in London.		Refined Tin in Wales.	
	s.	d.	s.	d.		s.	d.	s.	d.
1818	84	9	88	6	1828	73	3	81	9
1819	75	3	78	6	1829	74	0	80	3
1820	73	3	76	9	1830	73	9	78	0
1821	75	8	81	0	1831	73	6	83	0
1822	79	6	100	9	1832	72	9	78	0
1823	94	9	105	3	1833	72	9	78	9
1824	88	0	93	3	1834	78	0	88	6
1825	91	4	94	6	1835	91	6	99	0
1826	77	0	82	3	1836	109	6	114	3
1827	76	0	83	3	1837	88	0	93	3

The price of tin-plate grain-tin is usually about 5s. per cwt. above the price of refined tin.

I do not possess any record of the quantity of British (or Cornish) tin exported prior to 1783. From that year to 1837 the account is complete, with the exception of the years 1809 and 1813. In the former, I think 1500 tons will not be far from the truth. In 1813 the Custom-house was burnt, and no account could be obtained; but perhaps 1200 tons may be stated as the quantity, as nearly as possible.

No. 6.—*Quantities of British Tin exported in each Year from 1783 to 1838.*

Years.	Tons.	Years.	Tons.	Years.	Tons.
1783	1,690	1802	1,663	1821	1,461
1784	1,564	1803	1,553	1822	1,792
1785	2,002	1804	1,949	1823	1,318
1786	2,348	1805	1,641	1824	1,844
1787	2,230	1806	1,415	1825	1,712
1788	2,322	1807	1,229	1826	2,182
1789	2,215	1808	1,469	1827	2,474
1790	2,910	1809	1,500*	1828	2,071
1791	2,618	1810	825	1829	1,661
1792	2,884	1811	862	1830	1,521
1793	1,981	1812	1,444	1831	1,088
1794	2,312	1813	†	1832	1,592
1795	3,004	1814	993	1833	1,249
1796	2,756	1815	1,244	1834	468
1797	1,840	1816	1,719	1835	388
1798	2,214	1817	2,382	1836	558
1799	1,713	1818	1,702	1837	864
1800	1,782	1819	1,390	1838	1,254
1801	1,721	1820	1,292		

* The account for this year is imperfect, but from the particulars which are known, the quantity mentioned cannot be far from the truth.

† Custom-house burnt. No accounts could be obtained.

From the preceding account the gradual increase in the quantity of tin consumed in Great Britain may easily be seen. It amounted—

No. 7.

			Tons.	Tons.
In 8 years, from 1783 to 1790,	to	7,412, or annually	926	
10 ,, 1791 1800.	,,	7,545,	754	
10 ,, 1801 1810.	,,	11,179,	1,118	
10 ,, 1811 1820, supposed to	to	16,000,	1,600	
10 ,, 1821 1830,	to	26,158,	2,616	
7 ,, 1831 1837,	,,	23,542,	3,363	

The causes of the rapid increase of the home consumption are the great extension of the tin-plate manufacture, and those of Prince's metal, Queen's metal, Britannia metal, &c. wares.

No. 8.—*The relative Quantities of British Tin exported in the same Periods.*

		Tons.	Tons.
In 8 years, from 1783 to 1790, produced	24,593, exported	17,281 or $\frac{7}{10}$	
10 ,, 1791 1800, ,,	31,777, ,,	24,232 $\frac{3}{4}$	
10 ,, 1801 1810, ,,	76,144, ,,	14,965 $\frac{4}{5}$	
10 ,, 1811 1820, ,,	30,473, ,,	ab. 14,200 $\frac{7}{15}$	
10 ,, 1821 1830, ,,	44,194, ,,	18,036 $\frac{2}{3}$	
7 ,, 1831 1837, ,,	29,749, ,,	6,207 $\frac{1}{5}$	

No. 9.—*Quantities of Foreign Tin imported (on Bond) into, and exported from, Great Britain, in each Year from 1815 to 1838.*

	Imported.	Exported.		Imported.	Exported.
Years.	Tons.	Tons.	Years.	Tons.	Tons.
1815	325	198	1827	111	147
1816	275	279	1828	169	163
1817	235	278	1829	134	129
1818	72	69	1830	776	521
1819	15	116	1831	405	611
1820	65	152	1832	1,460	1,086
1821	55	32	1833	1,756	1,992
1822	77	96	1834	2,338	2,334
1823	323	275	1835	985	1,190
1824	319	235	1836	1,162	861
1825	211	235	1837	1,455	1,461
1826	170	282	1838	1,536	1,451

No. 7 contains a statement of the relative increase in the consumption of tin in Great Britain. It would naturally be expected, that as the consumption in the last period was nearly four times as much as in the first, the produce of the mines would have proportionably increased; but the statement No. 8, of the relative quantities exported in the same period, will shew that the diminution of the one (allowing for the real increase of produce) was nearly equal to the increase of the other. The cause of this falling-off in the quantity exported may be easily found in the gradual increase of foreign tin imported into Europe and America, which, being rendered lower than Cornish tin could be afforded, naturally displaced it.

No. 9 contains an account of the quantities of foreign tin imported into and exported from Great Britain, but it is of little use except to shew the rapid increase; for, without the knowledge of the quantities imported into other parts of Europe and America, it affords no data for other calculations.

I am not aware when tin was first brought into Europe from Banca; but in an old document in my possession I find the quantities brought to Holland (the only country into which it could then be imported) in 30 years, from 1760 to 1789 inclusive, were as follows:—

No. 10.—*Quantities of Banca Tin brought to Holland in each Year from 1760 to 1789.*

Years.	Tons.	Years.	Tons.	Years.	Tons.
1760	324	1770	210	1780	310
1761	185	1771	311	1781	None.
1762	325	1772	457	1782	44
1763	369	1773	210	1783	136
1764	60	1774	311	1784	372
1765	279	1775	390	1785	310
1766	146	1776	256	1786	195
1767	167	1777	250	1787	543
1768	311	1778	262	1788	80
1769	457	1779	409	1789	40

From the best information which I have been able to obtain, I calculate the quantity now produced in Banca at about 2700 tons, and in other islands, and the Malayan peninsula, about 1300 tons, or 4000 tons in all annually. The latter is known by the name of Straits' tin, and is always considered as of more doubtful quality than the Banca tin. What part of this produce goes to China it is almost impossible to ascertain.

It is very difficult, if not impossible, to ascertain the number of people employed in mines producing tin. In tin-mines, exclusively, it might easily be estimated; but a large portion of the tin is raised from mines which also produce copper, and are called copper-mines. I can only therefore estimate the number in the mass at about 10,000 men, women, and children; and these have perhaps 30,000 more dependent on them.

The same cause makes it equally difficult to ascertain the quantities of the different articles consumed in the mines.

When the mines just pay the expenses of working them, about one-half of the cost of the tin may be reckoned as paid to the workmen, and the other half for agency, expense of draining the mines, coal, timber, machinery, &c.

The tin-mines of Cornwall have not, on the whole, been a profitable concern. The year 1837 was a peculiarly unprofitable one. The state of the tin-mines in that year was particularly ascertained for the information of the Government, on an application from the miners for the abolition of the duty paid to the Duke of Cornwall. The result was as follows:—

	£.
Loss on 58 mines	111,517
Deduct the supposed increase in the value of the property on the mines	31,000
	<hr/>
	80,517
Profit on 10 mines	20,358
	<hr/>
Net Loss	£60,159

This great loss was caused partly by the almost unprecedented low price of tin in 1837, and also by the unfortunate termination of many

of the scrip concerns. No one will suppose that it presents a view of the general state of the tin-mines.

Until 1838 all the tin of Cornwall paid a duty of 4s. per 120 lbs. to the Duke of Cornwall, or to the sovereign when there was no duke: the fees to the officers, and the loss of time, were equal to 1s. more. This duty is now however abolished, and the miners reap the benefit.

Letter from Dr. Julius, Foreign Member of the Statistical Society of London, &c., pointing out the Excess of Male Births among Jews in the City of Hamburg.

Hamburg, February, 1839.

I HOPE I shall soon be able to transmit to you, for the Society's information, a Paper on the State of Crime in the kingdom of Naples.

Meanwhile, I beg you to lay before the Society the following table of the number of births in the city and suburbs of Hamburg during the twelve years from 1826 to 1837, distinguishing the sexes and races. This table gives the remarkable result, *already observed in other places*, that the proportion of boys born among the Jews is much larger than among Christians. In Hamburg, the proportion of female to male births, from 1826 to 1837, has been equal among the Christians to 100:105·76, and among the Jews to 100:114·81.*

(Signed)

JULIUS.

Table of Births in the City and Suburbs of Hamburg, in each Year from 1826 to 1837.

YEARS.	LIVING BIRTHS.						STILL-BORN.
	Christians.		Jews.		Total.		Christians and Jews.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys and Girls.
1826†	1674	1600	116	103	1790	1703	242
1827	2043	1928	93	90	2136	2018	205
1828	2009	2001	110	92	2119	2093	345
1829	2174	2059	111	111	2285	2170	260
1830	2160	1943	104	101	2264	2044	274
1831†	1878	1738	113	91	1991	1829	339
1832	2277	2179	105	96	2382	2275	283
1833	2401	2251	118	97	2519	2318	387
1834	2557	2329	118	108	2675	2437	317
1835	2198	2217	126	102	2324	2319	417
1836	1982	1852	127	99	2109	1951	318
1837	2237	2100	118	100	2355	2200	349
Total .	25,590	24,197	1359	1190	26,949	25,387	3736
Proportions	100 to 105·76		100 to 114·81		100 to 106·15		1 to 14 Living Births.

* In Prussia, upon an average of the fifteen years from 1820 to 1834, the proportion of female to male births among the whole population, including the Jews, was 100:105·97, and among the Jews alone, 100:111·21.—See "A Statistical view of Births and Deaths in the Prussian States." Transactions of the Statistical Society of London. Part I., p. 125.—Ed.

† The years 1826 and 1831 were both marked by commercial distress, producing immediately a diminution of births.

First Annual Report of the Registrar-General on Births, Deaths, and Marriages in England, in 1837-8.

As this Report has been very recently presented to Parliament we can advert but briefly to the many important Statistical facts which it embodies. With the census, the registration of marriages, births, deaths, and diseases, constitutes the basis of almost all Statistical operations, so that the success of the Registration Acts introduced by Lord John Russell has been regarded by Statisticians with considerable anxiety. The Act had a twofold object in view: the first aimed at the registration of births, deaths, and marriages, as civil acts, irrespectively of religious differences. In this sense it was an extension of the principles of religious liberty, and has relieved Dissenters from the pressure of grievances under which they previously laboured. The record of the births, deaths, diseases, and marriages of the people of England, as Statistical facts by which the condition and progress of the population might be accurately noted, was a still more important object of the Act.

Important and obvious as are the applications of the registered facts, the measure had to encounter considerable opposition. Its advantages were scarcely perceived at first by the multitude; and some of the clergy of the Established Church threw obstacles in its way, under an erroneous apprehension that the registration of births might interfere with the administration of baptisms. By taking active steps to make known in every way the nature, advantages, and obligations of the Act, and by a firm, but conciliatory conduct, the Registrar-General appears to have succeeded beyond the most sanguine expectations, in obtaining, during the first year of its operation, an almost complete register of deaths and marriages. The register of births is less complete; but this is owing to the want of a clause in the Act to render the information of births imperative.

The country is divided into 618 districts, over each of which is appointed a Superintendent-Registrar, and which are generally coincident with the poor law unions. In the latter end of 1838 there were 2,193 Registrars employed. Certified copies are transmitted to the General Register Office quarterly: they are collected by the Superintendent-Registrars from more than 14,000 persons charged with the duty of compiling them. More than 80,000 separate papers, containing 847,149 entries, have been thus transmitted, of which 739,737 (being all the entries of births and deaths, and such marriages as are registered by the Registrar of Marriages) have been compared with the original by the Superintendent-Registrar, and certified to be correct. The certified copies are examined, arranged, and indexed at the General Register Office, and there the abstracts are made which are contained in the Annual Report.

In the year ending June 30th, 1838, it appears that 111,481 marriages were registered; 107,201 according to the rites of the Established Church, namely, 9 by special license, 13,677 by license, 68,410 by bans, and 493 by a certificate from a Superintendent-Registrar; while in 24,612 instances it was not stated in which of the foregoing forms the marriage was performed: 4,280 marriages took place *not* according to the rites of the Established Church, namely, 2,976 in registered places of worship, 1,093 in the offices of Superintendent-Registrars, 76 between Quakers, and 135 between Jews. In the first quarter 24,030

marriages were registered, in the second 34,449, in the third 23,201, in the fourth 29,801. The mean of the three last quarters was 29,150; and this would make the annual number 116,600, while, according to former estimates, the number should have been 116,000.

399,712 births were registered—204,863 of males, 194,849 of females. The numbers registered in the first quarter amounted to 74,588, in the second to 89,528, in the third to 113,815, in the fourth 121,781. The registration of births “has, since the commencement, made a considerable and progressive advance; and during the fourth quarter of the first year attained a superiority in point of numbers over the average registration of baptisms,” which, it is estimated by the Registrar-General, would have amounted to 111,147 quarterly in 1837-8. It is, on every account, greatly to be desired that the registration of births should be rendered complete; but this appears scarcely attainable, unless the Act of Registration shall be made compulsory.

The deaths registered in the year amounted to 335,956, to which must be added 2,704 deaths which occurred in the first year, and were registered in the first quarter of the second. This would make 338,660 deaths in the year, while according to former proportions, the probable number of burials entered in the parochial registers during the same period would be 291,715. Mr. Finlayson, in a communication addressed to the Registrar-General, and appended to the Report, estimated the total deaths at home, in the year ending June 30th, 1838, at 335,968.

The following is an abstract of two tables, shewing the number of registered deaths of males and females at each age, and the relative proportion of the number dying in each period.

AGES.	Total Number of Deaths.			Relative Proportion out of 1000 Deaths.		
	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 year* . . .	39,990	31,898	71,888	234·66	193·72	214·54
1 and 2 years . . .	21,672	21,219	42,891	127·17	128·85	128·
3, , 4, , . . .	8,108	8,147	16,255	47·57	49·47	48·51
From 5 to 9, , . . .	7,821	7,619	15,440	45·89	46·27	46·07
10, , 14, , . . .	4,188	4,496	8,684	24·57	27·3	25·91
15, , 19, , . . .	5,276	6,172	11,448	30·96	37·48	34·16
20, , 24, , . . .	6,651	7,164	13,815	39·02	43·5	41·22
25, , 29, , . . .	5,966	6,582	12,548	35·	39·97	37·44
30, , 34, , . . .	5,633	6,162	11,795	33·05	37·42	35·2
35, , 39, , . . .	5,518	5,641	11,159	32·38	34·25	33·3
40, , 44, , . . .	5,609	5,383	10,992	32·91	32·69	32·8
45, , 49, , . . .	5,556	5,047	10,603	32·6	30·65	31·64
50, , 54, , . . .	5,474	5,073	10,547	32·12	30·8	31·47
55, , 59, , . . .	5,716	5,174	10,890	33·54	31·42	32·5
60, , 64, , . . .	6,905	6,692	13,597	40·51	40·64	40·57
65, , 69, , . . .	6,997	6,888	13,885	41·05	41·83	41·43
70, , 74, , . . .	7,320	7,403	14,723	42·95	44·95	43·93
75, , 79, , . . .	6,868	7,157	14,025	40·3	43·46	41·85
80, , 84, , . . .	5,189	5,746	10,935	30·48	34·89	32·63
85, , 89, , . . .	2,893	3,435	6,328	16·97	20·86	18·88
90 and upwards . . .	1,068	1,566	2,634	6·26	9·51	7·86
Unknown	547	327	874	..	..	..
Total	170,965	164,991	335,956	1000·	1000·	1000·

* Excluding still born children, who are not required to be registered.

Similar tables are given for each of 25 divisions of the country, which have been made with reference, as far as possible, to the natural character of the several districts, and the employments of the population.

From a very able report by Mr. Farr upon the causes of death, it appears that, in the half-year ending 31st December, 1837, the causes of death were assigned in 141,607 instances. The total deaths of males and females from each cause are given for England and Wales, and for each of 25 divisions of the country, and the annual mortality by each of 91 causes of death has been deduced from the facts registered. The proportion of deaths in 100,000 caused by each class of diseases in each division has also been calculated.

The following is an abstract of this information, the diseases being grouped together in a few classes according to their character:—

CLASSES of DISEASES.	Total Number of Deaths distinguished.			Per-centage Proportion of Deaths.		
	Male.	Female.	Total.	Male.	Female.	Total.
Epidemic, Endemic, } and Contagious. }	16,190	16,347	32,537	22·662	23·297	22·977
<i>Sporadic: viz.—</i>						
Nervous system . .	11,729	10,123	21,852	16·418	14·427	15·431
Respiratory organs .	18,925	19,597	38,522	26·490	27·929	27·203
Organs of circulation	902	694	1,596	1·263	·989	1·127
Digestive organs .	5,115	4,735	9,850	7·160	6·748	6·956
Urinary organs . .	683	133	816	·956	·190	·576
Organs of generation	13	1,485	1,498	·018	2·117	1·058
Organs of locomotion	505	424	929	·707	·604	·656
Integumentary system	158	106	264	·221	·153	·187
Of uncertain seat .	7,942	8,265	16,207	11·117	11·779	11·445
Old age	5,674	7,017	12,691	7·942	10·000	8·962
Violent deaths . .	3,605	1,240	4,845	5·046	1·767	3·422
Total	71,441	70,166	141,607	100·	100·	100·

The per-centage proportion of deaths by small-pox, typhus, and phthisis, was as follows:—

	Males.	Females.	Total.
Small-pox . . .	4·262	3·935	4·104
Typhus	6·213	6·567	6·389
Phthisis . . .	18·152	21·073	19·599

With respect to the principal diseases in the first class, it appears that 2,520 persons died of scarlatina, 3,044 of hooping-cough, 4,732 of measles, and 5,811 of small-pox. The ages of 1,056 persons who died of small-pox are enumerated, and the number under 5 years of age was 887. It is probable, therefore, that the majority of the 5,811 had never been vaccinated, and that about 12,000 die annually by small-pox through the neglect of the parents.

The diseases of towns and of the open country are shewn to differ very considerably both in character and intensity. Two comparative tables of the diseases in cities and in counties are given, of which the following abstract will be found very interesting.

The first comparison is between the 32 metropolitan unions and the

five counties of Cornwall, Devon, Dorset, Somerset, and Wilts. The population of the former, according to the census of 1831, was 1,594,890, and of the latter 1,599,024. The rate of increase of the former, during the decennial period from 1821 to 1831, was 20 per cent.; that of the latter 12 per cent.: according to which, supposing the rate to remain constant, the population of the metropolis, on 1st October, 1837, would have been 1,790,451, and that of the counties 1,723,770. The area of the former is 70 square miles, and there are, therefore, 25,578 inhabitants to each square mile; while the area of the latter is 7,933 square miles, and the population 222 to each.

The second comparison is between the districts of Aston, Bath, Birmingham, Bristol, Cambridge, Carlisle, Clifton, Derby, Dudley, Exeter, Leeds, Leicester, Liverpool, Manchester, Maidstone, Newcastle-on-Tyne, Northampton, Nottingham, Salford, Sheffield, Stoke-on-Trent, Sunderland, Wolverhampton, and West Derby, embracing all the principal towns in the kingdom, and the counties of Essex, Gloucester (exclusive of Bristol and Clifton), Hereford, Norfolk (exclusive of Norwich), Suffolk, Sussex, and Westmoreland. The population of the former, in 1831, was 1,484,402, of the latter, 1,656,455. The rate of increase in the cities, from 1821 to 1831, was 31 per cent.; in the counties 11 per cent. Hence the population, on the 1st October, 1837, might be estimated at 1,762,710 in the former, and 1,776,980 in the latter. The area of the cities was 677 square miles, with a population of 2,603 to each; and the area of the counties 9,312 square miles, with a population of 190 to each square mile.

In the tables contained in the Report each disease is specified, and the sexes are distinguished; but it is necessary here to omit the latter distinction, and to group the diseases in the same manner as before.

CLASSES of DISEASES.	First Comparison.		Second Comparison.	
	Metropolis.	Counties.	Cities.	Counties.
Epidemic, Endemic, and Contagious	6,562	3,695	6,204	2,350
Sporadic:—				
Of the Nervous system	4,147	1,779	3,558	1,828
„ Respiratory organs	6,559	3,843	6,060	4,004
„ Organs of circulation	356	146	234	163
„ Digestive organs	1,689	940	1,787	892
„ Urinary organs	111	75	108	86
„ Organs of generation	252	137	208	128
„ Organs of locomotion	150	71	112	83
„ Integumentary system	27	27	35	28
Of uncertain seat	2,482	1,883	1,914	1,847
Old age	1,690	1,453	1,234	1,649
Violent deaths	580	524	790	405
Not specified	354	647	750	1,010
Total	24,959	15,220	22,994	14,473

From these two tables it appears that the excess of mortality in the metropolis, compared with the five southern counties of England, is 64 per cent., or, in other words, that for every 100 persons who died in those counties, 164 died in the metropolis. The comparison of the other

towns and counties is rather more favourable for the former, the proportion being as 100 to 158.

The mortality and diseases of cities vary greatly: the following comparison of the relative mortality in different parts of the metropolis will be found full of interest. It exhibits the mean annual mortality of females in each of the 32 metropolitan districts, excluding the deaths in hospitals. The females alone are shewn, as their rate of mortality is less likely to be influenced by the different nature of their occupations than that of the males.

Unions 1 to 11.	Annual Deaths per cent.	Unions 12 to 22.	Annual Deaths per cent.	Unions 23 to 32.	Annual Deaths per cent.
Whitechapel .	3·908	St. Saviour . . }	2·790	Kensington .	2·190
Shoreditch .	3·164	St. Olave . . }		St. James . .	2·154
St. Giles . .	3·127	Clerkenwell .	2·756	St. Marylebone.	2·137
Bethnal Green.	3·054	St. George, . }	2·700	Islington . .	2·130
Bermondsey .	3·046	Southwark . }		St. Pancras .	2·035
East London . }		Greenwich . .	2·662	Lambeth . .	1·994
West London . }	3·014	Strand . . .	2·494	London (City).	1·980
St. George, East	2·970	Poplar . . .	2·452	Camberwell .	1·814
St. Luke . .	2·958	Westminster .	2·445	Hackney . .	1·814
Holborn . .	2·880	Stepney . . .	2·428	St. George, Ha-	1·785
Rotherhithe .	2·838	St. Martin-in-the }	2·271	nover-square . }	
		Fields . . . }			
		Newington . .	2·264		
Mean .	3·096	Mean .	2·526	Mean .	2·003

It is found, from a comparison of the several districts, that, *cæteris paribus*, the mortality increases as the density of the population increases; and, where the density and the wealth of the population are the same, that the rate of mortality depends upon the efficiency of the ventilation, and of the means which are employed for the removal of impurities.

The following abstract of the mean mortality of the above districts in the three groups there distinguished will shew this in a striking manner. In this table males are included.

Mean of Districts comprising the Unions.

	1 to 11.	12 to 22.	23 to 32
Number of square yards to one person	57	78	217
Annual rate of mortality per 100 .	3·231	2·839	2·163
Annual rate of mortality per 100, by diseases of—			
The epidemic class	·991	·701	·495
Typhus	·324	·205	·107
The nervous system	·543	·467	·369
The respiratory system	·822	·768	·588
Phthisis	·478	·451	·354
The digestive organs	·208	·197	·155
Other classes	·758	·706	·567

Among the diversities which especially demand attention, and by
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which there is least danger of being led to false conclusions, are those which relate to longevity, shewing the varying proportions of deaths in old age in different portions of the kingdom. From a few instances of longevity no inference can be safely drawn; but the fact that, of the deaths in any district, a comparatively large portion is above the age of 70, is a strong presumption in favour of the healthiness of that district. These proportions are found to vary greatly. In the whole of England and Wales, out of 1,000 deaths, 145 have been at the age of 70 and upwards; while in the North Riding and northern part of the West Riding of Yorkshire, and in Durham, excluding the mining districts, the proportion has been as high as 210. In Northumberland, excluding the mining district, Cumberland, Westmoreland, and the north of Lancashire, the proportion has been 198; in Norfolk and Suffolk 196, in Devonshire 192, and in Cornwall 188. In contrast with this evidence of the large proportion of persons who attain to old age in these more thinly-peopled portions of the kingdom, we find results extremely different where the population is densely congregated. In the metropolis and its suburbs the proportion who have died at 70 and upwards has been only 104; and even this proportion is favourable when compared with that of other large towns; the proportion in Birmingham being 81, in Leeds, 79, and in Liverpool and Manchester only about 63. A comparison of the mining parts of Staffordshire and Shropshire, and of Northumberland and Durham, with the rural districts surrounding each, exhibits great differences in this respect, the former averaging 109, and the latter 176. A very marked diversity also appears in the proportion of deaths of infants in different parts of the country. In the mining parts of Staffordshire and Shropshire, in Leeds and its suburbs, and in the counties of Cambridge and Huntingdon, and the lowest parts of Lincolnshire, the deaths of infants under one year have been more than 270 out of 1000 deaths at all ages; while in the northern counties of England, in Wiltshire, Dorset and Devon, in Herefordshire and Monmouthshire, and in Wales, the deaths at that age, out of 1000 of all ages, have scarcely exceeded 180.

It is impossible to appreciate too highly the value of the information contained in this Report. One of the great advantages which it possesses, is, that the facts are given as well as the deductions, by which means the latter may be tested, and the former be employed for the purpose of new comparisons and calculations. When the system of registration shall have been perfected throughout the country, more particularly with regard to births, and when the census of 1841 shall have been taken, as we hope it will be, in as perfect a manner as circumstances will admit, we shall possess a mass of Statistical data relating to our population which will open a new and vast field of improvement to the legislator, the actuary, and the physician, and is calculated to bring about results of important advantage, not only to this country, but to the whole human race.

Statistics of the Population of Norway. By Dr. FALLATI, Professor of Statistics and Political History in the University of Tübingen.

THE subject of the approaching census of the United Kingdom having already attracted the attention of the Statistical Society of London, it appears desirable to give a brief account of the mode in which the last census of Norway was taken, and of the nature of the information which was obtained. The Statistical tables of that census, presented by Professor Holst to the Statistical Society, contain the returns of the population of Norway on the 29th Nov. 1835, compared with a similar enumeration in the year 1825. The persons employed to take the census were, in towns, the magistrates; and in the country, the clergy. Every inhabited house was noted separately in the lists; individuals were reckoned as inmates in the house in which they usually resided; all persons holding offices which took them from home during the day were enumerated in the house in which they slept; military men, not dwelling in the circuit of civil jurisdiction, but in citadels or barracks not situated in towns, were considered as belonging to the several military districts in which those places were situated.

The same principle was adopted with respect to prisoners confined in fortresses, and persons temporarily absent, such as travellers, lodgers, or sailors on a voyage, who were included in the families to which they belonged when at home, or with which they deemed themselves connected. The head "officers" contains only those appointed by the king. Teachers appointed by the king to all schools, classical, middle, and military (when the latter have no military character), are included under the head of ecclesiastical officers. Only those persons are classed as merchants who hold patents as such from the king or from magistrates. Paupers are those who are supported by the community. Widows continuing the business of their deceased husbands are classed as men engaged in the same branch of industry.

It is necessary to bear in mind that in these tables persons who exercise two or more professions, for each of which there are separate columns, are counted in each; as, for instance, the same person may be counted twice as a husbandman and as an officer, or as a pensioner and a manufacturer. Divorced people are regarded as widower and widow, but those who are separated *à mensû et thoro* as married people. In general, all persons residing in the suburbs of towns, or in fortresses connected with them, are included in the population of the respective towns; but there are some exceptions to this rule.

The following is an abstract of the principal information to be derived from these tables. They contain the number of inhabitants in each town and parish on the first Sunday in Advent (29th Nov.), 1835, classed according to their sex, age (chiefly in decennial periods), civil state, and profession. The latter heads are divided into the following sections:—married and unmarried, widowers and widows; officers, ecclesiastical, civil, and military; pensioners; husbandmen, with different sorts of landed property; burghers, viz., merchants or wholesale dealers; hucksters, innkeepers, &c.; manufacturers and handicraftsmen; sailors; workmen who are not burghers; seamen and fishermen; journeymen; servants; and paupers.

The total number of inhabitants on the 29th November, 1835, was 1,194,827. In 1825 it was 1,051,318; the increase, therefore, during 10 years was 13·6 per cent., or about $1\frac{1}{3}$ per cent. annually. The total population in 1835 consisted of 585,381 males, and 609,446 females; the ratio of the two sexes being as 100 to 104. The rural population in the same year amounted to 1,065,825, of whom 523,922 were males, and 541,903 females, being in the proportion of 100 to 103. The population of the towns was 129,002, of whom 61,459 were males, and 67,543 were females, their relative proportion being 100 to 109. In 1825 the rural population was 935,855, and the population of the towns 115,463; consequently, the increase of the former during the 10 years was 14 per cent., and of the latter only 11 per cent.

The number of considerable towns in Norway is small, regarding as such every town with more than 3000 inhabitants, which, according to my knowledge of the country, acquired on a journey through part of it in the year 1835, is a fair distinction. There are not more than 11 towns in this class, the population of which will be seen in the following table:—

TOWNS.	1825	1835			
	Total.	Males.	Females.	Total.	Paupers.
Christiania . .	19,061	11,625	11,496	23,121	673
Bergen . . .	20,844	10,665	12,174	22,839	831
Drontheim . .	11,639	5,693	6,665	12,358	568
Christiansand .	7,446	3,615	4,050	7,665	370
Drammen . . .	6,933	3,470	3,780	7,250	317
Frederikshald .	4,612	2,476	2,445	4,921	160
Stavanger . . .	3,777	2,256	2,601	4,857	123
Konigsberg . .	3,691	1,625	1,915	3,540	324
Laurvig . . .	3,106	1,600	1,813	3,413	123
Moss	2,863	1,559	1,688	3,277	166
Arendal . . .	3,202	1,450	1,779	3,229	138

From this we see that Christiania, the new metropolis of Norway, which in 1825 contained nearly 1,800 inhabitants less than Bergen, now contains nearly 300 more than that old, and once so celebrated town, in which it will also be observed, the paupers are considerably more numerous than in Christiania. Stavanger appears to have increased in population more than any other of these towns. Konigsberg, notwithstanding the wonderful increase which has occurred in the produce of its silver mine during the last 10 years, is one of the very few towns in Norway the population of which has decreased during that period. Here, too, the number of paupers is very great, being as numerous as in Drammen, where the population is twice as great. These remarkable facts indicate a change of the ancient seats of welfare in Norway, the causes of which we must leave to others to interpret.

It has already been stated, that in towns the proportion of females to males is as 109 to 100. In two or three of the towns contained in the first table this proportion is much smaller; and in Christiania and Frederikshald, the males exceed the females: but this must be owing to the military quartered in those places; for while in all the towns the number of married persons of both sexes is nearly equal, and in

Bergen and most of the towns there is an excess of females among unmarried persons: in Christiania and Frederikshald, on the other hand, there is a large excess of unmarried males.

That the number of unmarried people of each sex should be in proportion to the total number of males and females respectively, would

Note.—With regard to age, the following statement exhibits the proportionate number out of 1000 existing between the several ages distinguished in the census, separating males from females, and the country from the town population:—

AGES.	Out of 1000 of each Class.					
	Towns.		Country.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.
Under 1 year	30·27	26·16	30·18	28·25	30·19	28·01
1 and 2 years	47·55	42·85	52·09	48·04	51·61	47·47
3 „ 4 „	45·65	43·59	53·88	51·56	53·01	50·67
5 & under 10 „	114·28	102·94	124·42	117·71	123·34	116·08
10 „ 20 „	208·26	184·17	211·91	199·04	211·52	197·39
20 „ 30 „	181·60	176·66	136·75	143·21	141·46	146·92
30 „ 40 „	146·60	142·38	127·41	126·84	129·42	128·55
40 „ 50 „	103·01	112·06	106·35	106·03	106·01	106·70
50 „ 60 „	69·22	78·81	71·61	77·70	71·36	77·83
60 „ 70 „	34·70	52·75	49·96	56·53	48·36	56·11
70 „ 80 „	14·80	27·95	26·60	33·22	25·39	32·64
80 „ 90 „	3·80	8·66	8·10	10·80	7·65	10·56
90 „ 100 „	·20	1·02	·70	1·03	·65	1·03
100 and upwards .	·06	..	·03	·04	·03	·04
	1000·	1000·	1000·	1000·	1000·	1000·

A comparison of the sexes of the whole population shews that the males predominate until the age of 20; that from 20 to 30 the females predominate: that from 30 to 50 the proportion of both sexes is nearly equal; and that above 50 the females exceed the males in a constantly increasing ratio up to the age of 100.

A comparison of the ages of the town and country population exhibits some interesting results. The proportionate number of children up to the age of 10 is considerably greater in the country than in the towns—in the ratio of 111 to 100. Between 10 and 20 it remains nearly the same among the females, but the excess is greatly reduced among the males. From 20 to 40 the number in the towns greatly exceeds the number in the country—in the ratio of 124 to 100 among the males, and of 118 to 100 among the females. From 40 to 100 the proportion changes among the males, the excess being on the side of the country; but among the females the change does not take place until after the age of 60. These facts indicate very clearly the time of life at which persons in Norway usually migrate from the country into the towns, the tide commencing to flow a few years earlier with the males than with the females; while, on the other hand, the males quit the towns and return to the country at a much earlier age, and apparently in greater numbers. It is probable that this excess of males returning from the towns is partly attributable to the military quitting service, and that a comparatively small proportion of females, particularly unmarried persons and widows, when once settled in towns, never return to the country. The facts also prove how necessary it is, in any investigation connected with the mortality of a district, to be aware of the proportionate number of persons existing in it at each age; as it is obvious that a comparison of the mortality of any part of Norway at a particular age, based on the average of the whole population, would lead to error. How far these data may be applied to the population of Great Britain it is impossible to say, but it is to be hoped that the census of 1811 will supply the deficiency of the last census, and afford exact information upon this subject.—*Ed.*

appear a very natural conclusion ; but it appears that in Norway the number of unmarried males was 375,771, whilst that of females was only 373,728. But, on the other hand, the number of widows, 42,660, greatly exceed that of widowers, 16,625. If even a small portion of the excess consist of widows of a marriageable age, the natural proportion of the two sexes is restored. The fact itself admits of an easy explanation. The greatest number of unmarried persons are necessarily under 20 years of age, especially in a northern climate, where marriage seldom occurs under that age; and in this period of life the males predominate considerably. During the next 10 years, from 20 to 30, the females are slightly in excess, during which time more females will be married than males, who usually marry somewhat later in life. In the 20 years following the numbers are nearly equal. After 50, when the greater part of those of both sexes who are able to marry are already married, the proportion of females exceeds considerably that of males; but a great portion of this excess must consist of widows, not unmarried women; so that the sum of unmarried males, at all ages, would necessarily be somewhat greater than that of unmarried females. The excess of widows, as compared with widowers, is obviously caused chiefly by the greater mortality among men, which the tables attest, there being 116 women to 100 men alive beyond the age of 50, and the proportion increasing with each decennary period, viz., 123 to 100, beyond 60; 132 to 100, beyond 70; and 139 to 100, beyond 80 years of age.

With regard to the occupations of the population we must be very brief. Norway is essentially an agricultural country. Hence we find, that among the total male population of 585,381 persons, of whom 434,267 are above 10 years of age, 158,405 are cultivators of the land, to which, as connected with agriculture, must be added a large portion of the journeymen and servants; 28,903 are engaged in navigation and the fisheries; 23,145 in commerce and manufactures; which number, however, may exceed that of seamen by the addition of a portion of the journeymen; 139,954 are classed as servants, of whom 124,627 belong to the country, and consequently especially to agriculture, and 15,327 to towns; 1,992 are officers, 2,104 are pensioners, and 30,697, or more than 5 per cent. of the male population, are paupers—4,720 being inhabitants of towns, and 25,977 belonging to the country.

There is a division of the agricultural population in these tables which is interesting. In order to encourage cultivation in a country where the products of the soil are gathered only by a difficult and toilsome labour, the government of Norway has judged fit to free newly-cultivated land from taxes for a considerable space of time. Therefore, the cultivators of land are divided into two classes, taxed and not taxed. Of the former, there are 103,192; and of the latter, 55,213. The former are again subdivided into proprietors or freeholders, possessing what is called the *odets-ret*, of whom there are 72,624; and those with a limited possession, a right of use, or farm, of which class there are 30,568.

In conclusion, I venture to express the hope, that the continuation of these tables, of which I have only been able to give a brief abstract, may afford the means of preparing a Statistical work on Norway, of similar value to that which the sister-country possesses, through the spirited and learned labours of M. af Forsell.

A Notice on the Last Census in Denmark. Communicated by Professor C. N. DAVID, of Copenhagen.

THE last census of the kingdom of Denmark was taken in 1834, and that of the dukedoms (Sleswic and Holstein) in 1835; and as the census was ordered to be made up every fifth year, it would in this way never have been simultaneous for the different parts of the realm. But in order to avoid this mischief, it has recently been ordered that the next census of the kingdom shall not be undertaken before 1840, and that it shall include all the possessions of the Crown of Denmark.

The result of the last census in the *kingdom* shewed that the population was 1,223,797 inhabitants, viz., 605,278 males and 618,519 females, having increased since the beginning of this century 32·3 per cent. The proportion of males to females was as 1000 to 1022, the same as it was thirty years ago at the census of 1801. But this proportion is much greater in other northern countries; and it is an interesting fact, upon which I shall enlarge on a future occasion, that in the extreme northern countries the relative number of women seems generally to be very much greater than in countries of the temperate zone. Such is the fact in Iceland, where the proportion of females to males is almost as 1100 to 1000. In Sweden the number of females at the census of 1830, compared with that of males, was as 1076 to 1000. Among 1000 men and women existing in 1834 there were alive,—

From birth to } the age of	10 years	232·18	From 50 to 60 years	79·65
From 10 to 20	210·51		„ 60 „ 70	52·10
„ 20 „ 30	162·75		„ 70 „ 80	24·26
„ 30 „ 40	133·92		„ 80 „ 90	6·13
„ 40 „ 50	98·17		„ 90 „ 100	0·33
			Above 100	0·008

Among 1000 men there were 337 married, 632 unmarried, and 31 widowers. Among 1000 women there were 327 married, 587 unmarried, and 86 widows. Among 1000 men and women, 205, or one-fifth, lived in towns, and 795, or four-fifths, lived in the country.

In the *dukedoms* of Sleswic and Holstein the population was 773,788, viz., 385,635 males and 388,153 females. The increase since 1803 was 28·5 per cent., the interval being 32 years. The proportion between males and females was as 1000 to 1007. Among 1000 individuals existing in the duchies in 1835 there were alive—

From birth to } the age of	10 years	243·69	From 50 to 60 years	75·17
From 10 to 20	210·30		„ 60 „ 70	49·60
„ 20 „ 30	157·03		„ 70 „ 80	21·15
„ 30 „ 40	136·74		„ 80 „ 90	4·53
„ 40 „ 50	101·45		„ 90 „ 100	0·29
			Above 100	0·007

Among 1000 men there were 330 married, 632 unmarried, and 38 widowers. Among 1000 women there were 352 married, 558 unmarried, and 90 widows. Among 1000 men and women, 174, or rather more than one-sixth, lived in towns, and 826, or five-sixths, lived in the country.

In the *kingdom* the proportion which the deaths bore to the population in the whole period, from 1801 to 1834, was as 1 to 41; but

this proportion was much more favourable from the Peace (1814) until 1829, being during that period as 1 to 47. In the years 1829 and 1831, the mortality was extremely great. Though Denmark was exempted from the infection of the cholera during those two years the mortality was as great as in the countries where that plague raged, a part of the kingdom having been scourged by an ague, which seemed very contagious. The number of deaths in those two years amounted to 74,361, averaging in each 37,181, while upon an average of the seven preceding years it only amounted to 24,575, the increase being equal to more than one-half. Out of 1000 deaths there were,—

	In the whole Period from 1801 to 1831.	In the Years 1824 to 1833, taken alone.
From birth to the age of 10 years . .	381.61	353.92
„ 10 to 20 years	40.93	42.83
„ 20 „ 30 „	55.53	56.16
„ 30 „ 40 „	59.42	61.93
„ 40 „ 50 „	68.44	73.35
„ 50 „ 60 „	87.06	92.07
„ 60 „ 70 „	118.82	121.70
„ 70 „ 80 „	117.96	126.18
„ 80 „ 90 „	59.93	63.86
„ 90 „ 100 „	7.63	7.69
„ Above 100 „	0.39	0.31
Unknown	2.28	0.00

Steam-Power used in Manufactures in Manchester and Salford.

Report of a committee of the Manchester Statistical Society, appointed to ascertain the amount of Steam-Power employed in various branches of manufacture, in the parliamentary boroughs of Manchester and Salford, 1837-8 :—

Employment of the reported Horse-Power.	Borough of Manchester. Pop. 1831, 187,022.	Borough of Salford. Pop. 1831, 50,810.	Total of the two Boroughs. Pop. 1831, 237,832.
Cotton-spinning and weaving . .	5,272	764	6,036
Bleaching, dyeing, printing, &c. .	756	521	1,277
Machine-making, foundries, &c. .	508	226	734
Silk throwing and manufacture . .	237½	104	341½
Cotton-thread and small wares . .	270	36	306
Collieries	106	100	206
Saw-mills	141	14	155
Engraving for printing calicos, &c. .	75	6	81
Fustian-shearing	46	34	80
Breweries	16	62	78
Flax-spinning . . . . .	..	70	70
Chemical works	55	11	66
Woollen	36	22	58
Variously employed, but in no de- partment amounting in the aggre- gate to 50 horses' power }	408	28	436
Total	7,926½	1,998	9,924½

PROCEEDINGS OF STATISTICAL SOCIETIES.

STATISTICAL SOCIETY OF LONDON.

Sixth Ordinary Meeting, Monday, 15th April, 1839. The Right Hon. HOLT MACKENZIE, Vice-President, in the Chair.

William Augustus Guy, Esq., M.D., was formally admitted a Fellow.

The following Gentlemen were proposed as candidates for admission :—

Thomas Babington Macauley, Esq., M.P., Clarges Street.
 Beriah Botfield, Esq., Norton Hall, Northampton.
 Leonard Horner, Esq., Bedford Place.
 William Farr, Esq., Registrar-General's Office.
 John Follett, Esq., 6, Austin Friars.
 William Stitt Wilson, Esq., Salisbury.
 The Rev. Arthur Ludlow, Spring Gardens.
 John Clayton, Esq., Cunningham Place, St. John's Wood.

The following Gentlemen were elected :—

The Hon. W. M. Rous, Worstead House, Norwich.
 Richard Michaux Muggerridge, Esq., Assistant Poor Law Commissioner, Manchester.
 John Richards, Esq., Cadogan Place.
 Louis Vigers, Esq., Downing College, Cambridge.
 Peter Baume, Esq., New North Road, Holloway.
 Edward Ayshford Sanford, Esq., M.P., Nynhead Court, Wellington, Somerset.

It was announced that the President had appointed the following Vice-Presidents for the session 1839-40 :—

The Right Hon. Viscount Sandon, M.P. | The Right Hon. Holt Mackenzie.
 The Right Hon. Sturges Bourne, F.R.S. | James Heywood, Esq., F.R.S.

It was announced that John Clendinning, Esq., M.D., had been appointed by the Council as Honorary Secretary in the place of James Heywood, Esq., who had resigned that office on being appointed to the Vice-Presidency.

The Paper read was a Report made to the Council by the Committee on Vital Statistics, upon the subject of the next general census of the population in 1841. The Committee recommended that the influence of the Society should be especially directed to secure the adoption by Government of the question of age among those for the census of 1841 ; that the baptisms and burials of the parish-registers should be included ; and that the ages of all who have died in England, from 1831 to 1840, should be published.

It was resolved that the Society approves of the Council's having taken up the question of the Population Census, and of the Report upon the subject read from the Committee on Vital Statistics ; and requests that the Council will continue its consideration of this important question by means of a Committee appointed especially for the purpose, joining to it any members of the Society, not of the Council, who may be deemed importantly serviceable, or who take an especial interest in the subject ; and that they do report, at their convenience, to the General Meeting of the Society.

Peter Baume, Esq., was formally admitted a Fellow.

Seventh Ordinary Meeting, Monday, 20th May, 1839. JAMES HEYWOOD, Esq., F.R.S., Vice-President, in the Chair.

Henry John Baxter, Esq., Bernard Hebler, Esq., Henry Reeve, Esq., The Rev. W. Dickenson, Henry William Charlton, Esq., were formally admitted.

The following Gentlemen were proposed as candidates for admission :—

Sir Woodbine Parish, K.C.H., Gloucester Place.
Russell Scott, Esq., Gaddesden Hoo, Herts.
John Dunlop, Esq., of Gairbraid, Lanarkshire.

The following Gentlemen were elected :—

Thomas Babington Macauley, Esq., M.P.	John Follett, Esq.
Beriah Botfield, Esq.	William Stitt Wilson, Esq.
Leonard Horner, Esq.	The Rev. Arthur Ludlow.
William Farr, Esq.	John Clayton, Esq.

A paper was read "On the Sickness and Mortality of the Troops of the United Kingdom," abstracted from Major Tulloch's Report, by J. C. W. Lever, Esq.—[See page 250.]

Eighth Ordinary Meeting, Monday, 17th June, 1839. JOHN BOWRING, Esq., L.L.D., in the Chair.

John Follett, Esq., William Farr, Esq., Hugh Wood, Esq., were formally admitted.

The following Gentlemen were proposed as candidates for admission :—

Major Charters, Sen., United Service Club.
Henry Hutchins, Esq., Chapel Street, Belgrave Square.

The following Gentlemen were elected Fellows :—

Sir Woodbine Parish, K.C.H., Gloucester Place.
Russell Scott, Esq., Gaddesden Hoo, Herts.
John Dunlop, Esq., of Gairbraid, Lanarkshire.

A letter was read from the Editor of the Central-Blatt der Gewerbe und Handels Statistik of Berlin.

A Report of the Committee on Vital Statistics was read, "On the Mortality and Sickness among the Metropolitan Police Force" (page 193).

Also, a paper "On the Endowed Charities in Herefordshire." By James Whishaw, Esq. (page 234).

A List of Statistical Papers printed by the Houses of Parliament during the present Session of 1839.—(Continued from page 189.)

HOUSE OF LORDS.

Nos.

- 49, 51, 58, 69, 73, 75, 86, 87, 88, 97, & 99, Bankruptcies—Returns of Sums received under Commissions, and Fiats prior to January, 1839
59 Grain—Imports from each Colony, and Average Rates of Duty, 1814-38
63 Exports—Value of British Exports to Northern Europe and all other Countries, 1829-38
64 Wheat and Wool—Quantities from each Country entered for Consumption, 1829-38
65 Turnpike Trusts—Unclaimed Dividends in hands of Trustees, July, 1838
71 Ditto Mortgages of Tolls, and Assignments thereof

- 74 Court of Exchequer—Rates of Fees on Proceedings; and Duties performed for each Fee
- 90 Police and Troops in Ireland—Number of Force in each Year, 1828-39
- 113 Illegitimate Children—Number Registered in certain Counties, 1832-34 and 1835-37
- 124 Court of Chancery—Number of Causes standing for hearing on 1st June, 1839
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- 16, 40, 42, 43, 46, 47, 50, 57, 76, 77, & 89, correspond with, or are contained in, Nos. 35, 42, 52, 123, 131, 158, 196, 240, 244, and 302, respectively, of the Papers printed by the House of Commons

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- 36 Gaol Returns—Annual Report from each Gaol, 1838
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- 78 Committals, Ireland—Number of Persons committed for Offences, 1838
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- 113 & 131 East Indies—Papers relating to Affairs in
- 116 Shrewsbury and Holyhead Road—Annual Report of Commissioners, 1838
- 117 Poor Laws—Unions to which an Order to withhold Out-door Relief has been sent
- 121 Expired and Expiring Laws—Report of Committee giving a List of
- 123 East India Company—Territorial Revenues and Disbursements, 1833-36.
- 124 Church Establishment, East India—Number of Persons maintained by Grant of Public Money; Amount thereof
- 128 Highland Roads and Bridges—Report of Commissioners, 1833
- 129 Public Works, Ireland—Report of Board, 1838
- 133 Municipal Boroughs—Receipts and Payments, 1833
- 134 Births and Deaths—Number in certain Districts, year ended June, 1833
- 135 Factories—Number visited by each Inspector and Superintendent
- 136 Metropolis Improvements—Report of Select Committee, 1839
- 137 Public Debt—Additions made thereto, 1829-38
- 139 & 303 British North America—Appendices C. D. & E. to Lord Durham's Report
- 140 & 211 Malta—Reports of Commissioners on the Affairs of
- 141 Upper Canada—Papers relating to the Creation of Rectories
- 142 to 146 Miscellaneous Estimates for the Year 1839-40
- 149 Finance Accounts—Annual Accounts for the Year 1838
- 150 Public Offices—Increase and Diminution of Salaries, 1838
- 151 Ditto Superannuations, 1838
- 152 Grain—Quantities Imported from each Country, and from Ireland, in 1838; also entered weekly for Consumption, Rates, and Amount of Duty, 1838
- 153 Hops, Malt, and Brewers—Growth, Produce, Consumption, Licenses, &c., 1838
- 155 Fire Insurances—Duty paid by each Office; Farming Stock Insured, 1838
- 158 & 200 Jamaica—Papers relative to the Conduct of the Negro Population
- 159 Hand-loom Weavers—Reports of Assistant-Commissioners on state of
- 160 Public Works—Advances and Repayments of Exchequer Bills, 1817-38
- 165 Exchequer Bills—Amount issued, charged in aid of 1839
- 166 Army—Commissaries' Accounts, 1837-38
- 167 Spanish Claims—Report of Commissioners
- 168 Grain—Total Imports, and Duty thereupon, 1829-38
- 172 Patents for Inventions—Fees and Expenses payable on taking out
- 173 Licensed Victuallers—Number in London, &c., charged with breaches of the law, 1830-38
- 174 Court of Session, Scotland—Number of Causes instituted and heard, 1839
- 176 Post-Office—Memorials against Delivery of Letters on Sundays
- 177 & 284 Education—Minute and Report of Committee of Privy Council

- 181 Scientific Experiments—Expenditure of vote of 1000*l.* granted in 1838
- 182 Beer-Houses and Licensed Victuallers—Number in Manchester and Salford, 1836-39
- 183 Tin, Zinc, and Calamine—Imports and Exports, 1836-38
- 184 Advertisements—Number and Duty paid, 1828-38
- 188 Holyhead Road—Loans and Repayments of Public Money
- 189 Savings' Banks—Sums received from, paid and due to, &c.
- 194 Ale and Spirit Dealers—Licenses granted and refused in Edinburgh, 1835-38
- 195 Tithes' Commutation—Notices and Agreements, &c., to 31st March, 1839
- 196 Ecclesiastical Commission, Ireland—Annual Report, 1838
- 199 Post-Horse Duties—Produce in different districts and periods
- 202 Mint—Returns of Coinage, &c., 1837-38
- 203 { Trinity House—Revenue and Expenditure, 1837
- 203 { Light-houses—Receipt and application of Tolls, 1837
- 204 Coinage Duties on Tin—Receipts and Payments, &c., 1829-38
- 205 Duchies of Cornwall and Lancaster—Receipts and Payments, 1838
- 206 Letters Patent of Denization—Fees payable
- 207 Navy—Returns relating to Expenditure, 1837-8
- 208 Courts of Session, &c., Scotland—Reductions since 1836
- 209 National Gallery, School of Design, and Tower—Number of Visitors, Students, Expenses, &c.
- 210 Timber—Imports into Dublin from North America, 1838
- 213 Newspaper Stamps—Number issued to each Newspaper, Jan. to March, 1839
- 214 Debtors, Scotland—Number imprisoned, January to March, 1838
- 215 Public Revenue—Receipts and Payments, 1838-9
- 216 Model Schools—Applications and Expenditure of grant of 10,000*l.* in 1835
- 217 Jamaica—Value of Exports from the United Kingdom to, 183-038
- 218 Senegal Gum—Quantities imported, 1833-38
- 222 Railways—First Report of Select Committee, 1839
- 227 Spirit Dealers—Number licensed to sell Tea and Coffee likewise
- 228 Wool and Woollens—Imports and Exports, 1838
- 229 Apples, Pears, and Cherries—Imports from each Country, 1819-38
- 230 Lead and Lead-ore—Imports and Exports, 1838
- 231 Coals, Cinders, and Culm—Shipments and Exports, 1837-38
- 232 Copper and Tin—Imports and Exports, 1838
- 233 Canada—Expenses of Lord Durham's Mission
- 234 Revenue Laws—Persons confined for offences against
- 235 Merchant Seamen's Corporation and Fund—Income and Expenditure, 1838
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- 240 Education, Ireland—Report of Commissioners, 1838-9
- 243 Holyhead Road—Advances by Parliament, and Repayments
- 244 Convict Ships and Transports—Number hired by Government, &c., 1836-38
- 245 Merchant Seamen's Fund—Receipts and Expenditure at Outports, 1837
- 247 Church Leases—Report of Select Committee, 1839
- 248 Chelsea Pensioners—Papers relating to Emigration of
- 249 Public Works, Ireland—Roads under management of Commissioners, &c.
- 250 Spirits—Quantities produced, consumed, transported; duty, 1838
- 251 Linen and Linen-yarn—Exports to each Country, 1838
- 253 West India Produce—Imported from each Colony, 1838
- 254 Bonded Corn—Quantities abandoned and destroyed, 1828-38
- 257 Criminals, Scotland—Expenses incurred on account of, 1834-38
- 258 Prisons—Expenses paid out of County Rates, 1836-38
- 259 Constabulary Force—Circular to Grand Juries, and Replies
- 260 { Bank of England—Returns to Stamp Office; Liabilities and Assets, 1837-39
- 260 { Exchequer Bills—Issued, Outstanding, &c., 1830-38
- 261 Barilla—Quantities consumed; Duties, Drawbacks, &c., 1834-39
- 262 Army—Balance-sheet; Effective Services, 1837-8
- 273 Steam Vessels Enquiry—Report of Commissioners
- 277 Prisoners, Scotland—Number imprisoned, 1836-38
- 278 Contempt of Court—Number of Prisoners for
- 279 Spirits—Quantities imported, consumed, exported, &c., 1826-38
- 280 Tobacco, Cigars, and Snuff—Quantities imported and consumed; duty, 1838
- 281 Packets—Receipts and Disbursements on Irish Stations, 1832-38

- 295 Turnpike Trusts—Report of Select Committee, 1839
 300 Public Income and Expenditure; amount, 1836-38
 301 Wine and Spirits—Quantities imported, paid duty, exported, &c., 1838
 302 Constabulary and Police, Ireland—Number and Salaries, &c., 1832-38
 305 Navy—Number and Names of Mates serving in the
 316 Savings' Banks—Accounts relating to, 1838
 330 Cotton Gloves and Hosiery—Quantities imported, 1835-38

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Criminal Law—Fourth Report of Commissioners
 Constabulary Force—First Report of Commissioners
 Shannon Navigation—Fourth and Fifth Reports of Commissioners
 Treaties with Persia
 Poor in Scotland—Report of Committee of General Assembly
 University of Glasgow—Report of Commissioners
 Universities of Aberdeen—Second Report of Commissioners
 Criminal Returns for England and Wales, 1838
 Post-Office—Convention with France
 Slave Trade—Correspondence
 War in Spain—Papers
 Births, Deaths, and Marriages—First Report of Registrar-General

MISCELLANEOUS.

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 2nd and 30th April, and 28th May, 1839, and in the corresponding Quarters of the preceding Year.

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1838.	£.	£.	£.	£.	£.	£.
3rd April	18,987,000	11,262,000	30,249,000	22,838,000	10,116,000	32,954,000
1st May	19,084,000	11,066,000	30,090,000	22,768,000	10,062,000	32,776,000
29th May....	19,018,000	10,736,000	29,804,000	22,648,000	9,806,000	32,454,000
1839.						
2nd April....	18,371,000	8,998,000	27,369,000	22,987,000	7,073,000	30,060,000
30th April ...	18,350,000	8,107,000	26,457,000	23,112,000	6,023,000	29,135,000
28th May	18,214,000	7,814,000	26,028,000	23,543,000	5,119,000	28,662,000

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and Remaining in Warehouse, in each of the Months ended 5th April, May, and June, 1839.

Months ended	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
5th April .	459,854	466,399	4,833	166,368	180,074	14,252
„ May .	213,702	177,309	41,227	55,919	38,089	27,805
„ June .	432,758	149,863	594,973	39,751	13,700	33,058

Statement of the Number of Passengers Landed or Embarked at Boulogne and Calais during each Year from 1833 to 1838.

Years.	Boulogne.	Calais.	Total.	Increase in 6 years. 52 per cent.
1833	15,755	41,413	57,168	
1834	19,061	44,614	63,675	
1835	25,910	38,278	64,188	
1836	55,512	35,302	90,814	
1837	56,015	28,843	84,858	
1838	61,899	25,162	87,061	

Aggregate Amount of Notes Circulated in England and Wales by Private Banks, and by Joint Stock Banks and their Branches, respectively, in each of the Quarters ended 31st December, 1837-38, and 30th March, 1838-39.

Quarters ended.	1837-8			1838-9		
	Private Banks.	Joint Stock Banks.	Total.	Private Banks.	Joint Stock Banks.	Total.
31st December	£. 7,043,470	£. 3,826,665	£. 10,870,135	£. 7,599,942	£. 4,625,546	£. 12,225,488
30th March ..	7,005,472	3,921,039	10,926,511	7,642,104	4,617,363	12,259,467

Average Prices of Corn per Imperial Quarter, in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week, from 1st March to 14th June, 1839; also the Average Prices of each Month, and of the Quarter ended Lady-day, 1839.

DATE.	WHEAT.			WEEKLY AVERAGE.					
	Weekly Average.	Aggregate Average.	Duty on Foreign.	Barley.	Oats.	Rye.	Beans.	Peas.	
Weeks ended	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
March 1 .	72 10	74 5	1 0	37 8	24 7	42 3	38 0	39 1	
„ 8 .	73 8	73 6	1 0	38 9	24 3	41 2	37 10	39 2	
„ 15 .	74 1	73 0	1 0	39 3	24 4	42 6	37 4	38 10	
„ 22 .	71 3	72 6	2 8	38 1	24 2	37 9	37 2	37 11	
„ 29 .	68 11	72 1	2 8	37 8	23 8	39 10	36 9	37 7	
April 5 .	68 8	71 7	6 8	37 9	24 4	40 7	36 6	36 8	
„ 12 .	68 3	70 10	10 8	38 2	24 6	40 9	37 2	37 7	
„ 19 .	71 0	70 4	10 8	39 2	24 10	39 7	37 11	38 1	
„ 26 .	72 7	70 1	10 8	40 1	25 2	39 0	38 9	38 9	
May 3 .	71 0	70 1	10 8	40 6	24 11	40 6	38 0	39 1	
„ 10 .	70 6	70 4	10 8	39 8	24 11	41 5	38 8	38 5	
„ 17 .	71 2	70 9	10 8	39 1	25 8	41 5	39 0	38 1	
„ 24 .	70 8	71 2	6 8	39 0	25 10	41 9	38 9	38 4	
„ 31 .	70 5	71 1	6 8	38 7	26 4	40 5	39 8	38 7	
June 7 .	69 7	70 7	10 8	38 10	26 4	43 11	39 11	39 7	
„ 14 .	69 2	70 3	10 8	39 1	26 7	41 4	39 10	38 10	
Months.									
March . .	72 1	73 1	..	38 3	24 3	40 8	37 5	38 6	
April . .	70 1	70 8	..	38 9	24 8	40 0	37 7	37 9	
May . .	70 9	70 8	..	39 4	25 6	41 1	38 9	38 6	
Quarter ended Lady-day . .	75 2	..	..	39 5	25 4	45 7	39 4	40 5	

An Abstract of the Net Produce of the Revenue of Great Britain in each of the Years and Quarters ended 5th April, 1838 and 1839.

	Years ended 5th April,			
	1838	1839	Increase.	Decrease.
	£.	£.	£.	£.
Customs	18,451,449	19,504,628	1,053,179	..
Excise	11,665,748	11,999,772	334,024	..
Stamps	6,461,885	6,604,986	143,101	..
Taxes	3,627,105	3,700,682	73,577	..
Post-Office	1,519,743	1,548,000	28,257	..
Crown Lands	65,000	145,000	80,000	..
Miscellaneous	34,443	90,408	55,965	..
Imprest and other Monies	272,454	506,095	233,641	..
Repayments of Advances.	510,564	641,686	131,122	..
Total Income . . .	42,608,391	44,741,257	2,132,866	..
	Quarters ended 5th April,			
	1838	1839	Increase.	Decrease.
	£.	£.	£.	£.
Customs	4,061,670	4,411,569	349,899	..
Excise	1,705,853	1,811,511	135,658	..
Stamps	1,648,194	1,640,253	..	7,941
Taxes	130,576	176,440	45,864	..
Post-Office	369,000	392,000	23,000	..
Crown Lands	65,000	40,000	..	25,000
Miscellaneous	25,841	35,545	9,704	..
Imprest and other Monies	35,018	31,853	..	3,165
Repayments of Advances.	83,562	125,786	37,224	..
Total Income . . .	8,129,714	8,694,957	601,319	36,106
Total Increase on the Year, £2,132,866; total Increase on the Quarter, £565,243.				

An Abstract of the Income and Charges of the Consolidated Fund in each of the Quarters ended 5th April, 1838 and 1839.

INCOME.			CHARGE.		
Description.	Quarters ended 5th April,		Description.	Quarters ended 5th April,	
	1838	1839		1838	1839
	£.	£.		£.	£.
Customs	3,456,275	3,991,146	Permanent Debt . .	3,545,543	3,538,968
Excise	1,705,853	1,862,449	Terminable Annuities	1,374,218	1,718,837
Stamps	1,648,194	1,640,253	Interest on Exche-		
Taxes	130,576	176,440	quer Bills . . . }	24,662	16,37
Post Office	369,000	392,000	Sinking Fund . . . }		
Crown Lands	65,000	40,000	Civil List	96,400	96,510
Miscellaneous	47,140	35,545	Other Charges . . .	328,312	326,959
Imprest and other Monies	35,018	31,853	Charge for Advances.	..	90,000
Repayments of Advances	83,562	125,786			
Total	7,545,618	8,295,472	Total Charges . . .	5,369,135	5,787,645
Repayments of Issues } in Ireland }	175,000	300,000	Total Surplus . . .	2,351,483	2,807,827
Total Income . . .	7,720,618	8,595,472	Total	7,720,618	8,595,472

An Analysis of Bankruptcies in England and Wales, shewing the Counties and Trades in which the same occurred, during each Month from January to April, 1839.—(In continuation of Account at Vol. II., p. 127.)

COUNTIES.	Jan.	Feb.	Mar.	Apr.	TRADES.	Jan.	Feb.	Mar.	Apr.
Bedford . . .	1	..	..	..	<i>Persons connected with Manufactures.</i>				
Berks . . .	..	1	3	1					
Bucks . . .	1	..	..	..		
Cambridge . .	..	..	1	1					
Chester . . .	2	1	..	3	Cotton Trade . .	..	2	2	2
Cornwall . . .	1	..	..	1	Woollen do. . .	1	1	..	1
Cumberland . .	1	..	..	2	Silk do. . .	1	1	..	..
Derby . . .	..	1	..	..	Linen do. . .	..	..	1	1
Devon . . .	..	2	4	1	Iron do. . .	..	..	..	..
Dorset . . .	..	1	..	3	Iron Wares . . .	2	..	1	3
Durham . . .	..	..	..	1	Building . . .	4	7	4	1
Essex . . .	..	1	..	1	Miscellaneous . .	3	6	4	5
Gloucester . .	5	..	2	3	<i>Agriculture.</i>				
Hants . . .	1	2	..	1					
Hereford . . .	1	1	..	2	Farmers. . . .	1	2	..	..
Hertford . . .	2	..	..	1	Corn, Hay, and Hop } Dealers, Millers. }	1	4	1	5
Huntingdon . .	..	1	..	..	Cattle and Wool } Dealers . . . }	2	..	1	3
Kent . . .	3	..	4	..	Coaches & Horses .	..	..	1	2
Lancaster . . .	10	11	13	13	Brewers, Maltsters, } and Distillers . }	1	..	6	1
Leicester . . .	2	1	..	..	<i>Other.</i>				
Lincoln . . .	1	3	3	..					
Middlesex . . .	14	18	20	25					
Monmouth . . .	..	..	..	..	
Norfolk . . .	..	1	2	2					
Northampton .	..	..	..	1	Innkeepers and Vic- } tuallers . . . }	11	6	7	16
Northumberland	3	..	..	..	Merchants, Ware- } housemen, Agents, }	6	11	8	12
Nottingham . .	..	..	2	..	Brokers, & Whole- } sale Dealers . . }				
Oxford . . .	..	..	..	..	Tradesmen, Shop- } keepers, & Retail }	30	19	29	31
Rutland . . .	..	..	..	..	Dealers . . . }				
Salop. . . .	1	..	..	1	Miscellaneous . .	3	4	..	1
Somerset . . .	2	2	1	2					
Stafford . . .	1	1	..	2					
Suffolk . . .	..	..	1	2					
Surrey . . .	3	4	4	2					
Sussex . . .	1	3	..	1					
Warwick . . .	4	5	1	2					
Westmoreland .	..	..	..	..	
Wilts . . .	..	..	..	..	
Worcester . . .	1	..	1	..					
York . . .	3	2	3	10					
Wales. . . .	2	1	..	..			
Total in 1839	66	63	65	84	Total . . .	66	63	65	84
Total in 1838	81	88	81	70					

QUARTERLY JOURNAL

OF THE

STATISTICAL SOCIETY OF LONDON.

OCTOBER, 1839.

Ninth Meeting of the British Association for the Advancement of Science.—August, 1839.

THE British Association for the Advancement of Science held its ninth meeting at Birmingham during the week commencing on the 26th August. In accordance with the regulations of that body established last year,* the Council of the Statistical Society of London nominated, on behalf of the Society, three of its Fellows, viz., Thomas Tooke, Esq., F.R.S., Wm. Felkin, Esq., and David Urquhart, Esq., as delegates to the General Committee of the Association.

The following new regulations were adopted on the recommendation of the Council:—

1st. That an admission fee of 1*l.* be required from all members admitted as annual subscribers at future meetings, in addition to their annual subscription of 1*l.*; the composition of life members to remain at 5*l.*

2nd. That every member, new and old alike, have the option of paying 5*l.* as a fixed book subscription, entitling him to receive a copy of the volumes published after the date of such subscription.

3rd. That all recommendations of grants of money, requests for special researches, and reports on scientific subjects be submitted to the Committee of Recommendations, and not taken into consideration by the General Committee, unless previously recommended by the Committee of Recommendations.

The Statistical Section met on Monday, with the following gentlemen for its Officers and Committee:—

President,—Henry Hallam, Esq., F.S.S., &c.

Vice-Presidents,—Sir C. Lemon, Bart., M.P., F.S.S., &c.; G. R. Porter, Esq., F.S.S., &c.

Secretaries,—Francis Clark, Esq., F.S.S.; Rawson W. Rawson, Esq., F.S.S.; W. Cook Taylor, L.L.D., F.S.S.

Committee,—Rev. Thos. Arnold, D.D.; G. Barker, Esq.; Rev. Jas. Bradshaw; Major-General Briggs, F.S.S.; the Chevalier Bünsen; Joseph Corrie, Esq.; the Earl of Dartmouth; Professor Fallati; Wm. Felkin, Esq., F.S.S.; C. B. Fripp, Esq.; W. R. Greg, Esq., F.S.S.; J. Kingsley, Esq.; Wm. Langton, Esq.; Professor Lipsius; the Mayor of Birmingham; Sir Oswald Mosley, Bart.; E. W. Pendarves, Esq., M.P., F.S.S.; F. Scheer, Esq.; Thos. Tooke, Esq., F.S.S.; Professor Tucker; W. L. Wharton, Esq.; J. Wickenden, Esq.

The following papers were read before the section:—

* See vol. i. p. 321.

Monday, 26th August.

1. Contributions to the Educational Statistics of Birmingham. By a Local Committee.*

2. Suggestions in favour of the Systematic Collection of Agricultural Statistics. By G. R. Porter, Esq., F.R.S., &c. (Page 291.)

3. Report on the State of the Working Classes in part of the County of Rutland. By the Statistical Society of Manchester. (Page 297.)

Tuesday, 27th August.

1. Report on the State of Education in the County of Rutland. By the Statistical Society of Manchester. (Page 303.)

2. An Inquiry into the Criminal Statistics of England and Wales. By Rawson W. Rawson, Esq. (Page 316.)

Wednesday, 28th August.

1. A Comparative View of Crime in various Districts of England and Wales. By Rawson W. Rawson, Esq. (Page 334.)

2. An Account of the Circulating Libraries in the Town of Kingston-upon-Hull. By the Statistical Society of Manchester.*

Thursday, 29th August.

1. Report on the Statistics of the Collieries in the North of England. By a Committee of the British Association, appointed at Newcastle. (Page 345.)

2. Contributions to the Commercial Statistics of Birmingham. By a Local Committee.*

3. Contributions to Academical Statistics. By Professor the Rev. Baden Powell.*

4. Report on the State of the Working Classes in Bristol. By the Statistical Society of Bristol. (Page 368.)

5. Contributions to the Medical Statistics of Birmingham. By a Local Committee.*

On Friday the Section did not meet.

It will be seen, from the above list, that contributions to three important branches of the statistics of Birmingham have been made by a local committee, which was appointed expressly to collect such information to be presented to the Association. When those papers appear in a future number of the Journal, it will be found that they are not only copious, but very valuable, and confer great credit upon the zeal and industry of the parties by whom they were collected and prepared. It is to be hoped that the example thus set at Birmingham will be followed in all the towns which the Association may in future visit, and that the announcement of its approach may serve as a signal for the appointment of a Committee to collect such information, to be laid at its meeting before the Statistical Section. The Association will thus both sow and reap knowledge at each of its visits. There is reason to believe that similar preparations will be made at Glasgow, and especially with regard to the branch of Medical Statistics.

The Committee of the Statistical Section offered recommendations for three grants of money for the prosecution of statistical inquiries during the ensuing year; but it is much to be regretted that only the first was sanctioned by the Committee of Recommendations.

1. £100 for continuing inquiries into the actual state of schools in England. The Committee to consist of Sir C. Lemon, Bart., M.P., H. Hallam, Esq., and G. R. Porter, Esq. (Granted.)

2. £150 for continuing inquiries into the state of the working classes of England. To Sir C. Lemon, Bart., M.P., H. Hallam, Esq., and G. R. Porter, Esq. (Rejected.)

3. £50 for an Inquiry into the Linen Trade of the North of Ireland. To Capt. Portlock, R.E., Professor Stevelly, and the Rev. Jas. Bradshaw. (Rejected.)

The next meeting of the Association will take place at Glasgow, on the 17th September, 1840.

* To appear in a future Number.

Suggestions in favour of the Systematic Collection of the Statistics of Agriculture. By G. R. PORTER, Esq., F.R.S., &c.

[*Read before the Statistical Section of the British Association, 26th August, 1839.*]

IF, throughout the whole range of *material* interests that affect the well-being of a community, there be any one subject of greater importance than another,—which, more than any other, exercises an influence over the condition, the progress, and the happiness of all classes of society,—without doubt that subject is the adequate supply of food for the people: and yet this is a subject which in our country has never hitherto been considered to any useful or practical end. What should we think of a General who should make no inquiries into the means that existed for the daily feeding of the army committed to his charge? and yet we supinely acquiesce in the apathy which has allowed the English Government to remain in ignorance of those means, with reference to the sustenance of the millions of which the nation is composed. Nay, more; we have allowed jealousies, prejudices, and the undefinable apprehensions of ignorance, to oppose every attempt at inquiry in this direction.

The amount of our ignorance upon this most important subject is so great, that to this day the public is without any authentic document from which to know even the quantity of land under cultivation in any county of England. The only information of this kind that we can make available for further calculations is contained in the estimates of an individual, Mr. Couling, who gave evidence before a Committee of the House of Commons, which was appointed in 1827 to inquire into the subject of emigration from the United Kingdom. Such an estimate it is manifestly beyond the power of any individual to make, with the requisite degree of accuracy. The time demanded for its accomplishment would necessarily be so great, that changes continually going forward would render it impossible to present a true result with regard to the earlier surveys, and the whole would consequently be incorrect. If even it be conceded that Mr. Couling's estimate was accurate at the time it was offered, we must bear in mind that it was given more than twelve years ago, during which time we have added at least four millions to our numbers, and have therefore necessitated other important changes, which must influence the degree and proportions that might then have correctly designated the employment of the soil. Allowing further, for the moment, that not only was the estimate correct, but that we had the means of rightly adjusting it to the altered circumstances of our population, we should still have acquired a very small, and only an initial, part of the facts which are required in order to arrive at any useful result. To this end it would be necessary to know, not only the extent of cultivable and cultivated land within the kingdom, but also the various uses to which it is applied, and the proportion allotted to each branch of cultivation. We should have then to inform ourselves concerning the productiveness of the soil, the proportion of its produce required for reproduction, the number of the various kinds of animals reared and maintained, the rate of their increase, the proportion of each required for the adequate reproduction of its own kind, the number applicable to the sustenance of the people, the number of skins furnished for purposes of manufacture, the number of fleeces shorn, with various other

particulars which it is not necessary to enumerate here: neither would it be sufficient that these points should be ascertained once for all. We require to know not merely whether the land is capable, under ordinary circumstances, of supplying the absolute wants of the population, but also whether or not the actual produce of each year, as it occurs, is sufficient to that end; and, if it be not sufficient, then to ascertain the proportion in which the harvest may be deficient. For this purpose it is indispensable to have an organised machinery in constant action.

The importance of accurately knowing the provision made for the sustenance of the people is surely not less than that of knowing the yearly produce of various articles of commerce, which are employed as accessories in manufacturing processes. The condition of the crop of Indigo in Bengal is accurately communicated to the merchants in London at the earliest moment when it can be known; and the information thus given has, through its influence upon the market-price, an immediate effect in checking or promoting consumption. The like result is known to attend upon the collection of information concerning the growth of Hops in this country, the extent of land devoted to the cultivation of that article being known through the records of the Excise Office—the department which is intrusted with the collection of the hop-duty.

In Belgium and Holland every kind of information connected with agriculture is obtained with the nicest accuracy. This duty is performed under the superintendence of a body of gentlemen, usually proprietors of estates, residing in different places, and who are elected in the respective provinces for purposes of local government. The functions of the persons thus elected are in many respects similar to those of justices of the peace in English counties. Having the requisite amount of local knowledge concerning the condition and circumstances of the several *communes* in their respective districts, they are enabled to prevent or to detect errors in the returns, which are made, according to forms prescribed for the purpose, at certain periods, by the farmers or occupiers of land; there is therefore reason for placing a considerable degree of confidence in the accuracy of the returns. The result of these returns is every year the subject of a detailed report, which is printed under the authority of the governor of the province, and is then open to the inspection of the inhabitants at large.

A considerable amount of information on the subject of agricultural statistics is collected in different parts of France. A statement was published in September, 1838, by the Prefect of the Department of the Eure, containing a complete account of the agricultural produce of each subdivision of that department. The returns upon which the accounts are based were furnished originally by the mayors, and were examined by committees appointed in each canton and *arrondissement*, and revised by the help of authentic documents otherwise procured by the prefect of the department, by which means the result has been rendered, if not absolutely perfect, yet substantially true. In this statement we find an account for each canton, giving its population and extent, the distribution of the soil, showing the nature of the crops and the breadth of land appropriated to each, the total produce, the average price of each kind of produce, the quantity used for seed, and the consumption of the native

population, with the extent of land appropriated to the growth of wood, and the quantity lying fallow. Beyond these particulars, the statement contains the number and value of different kinds of animals reared and kept in each canton, the number slaughtered in the year, and the price of each kind of meat.

In the course of a slight examination of this publication, comparing it with such facts as we possess concerning the agricultural interests of our country, some very striking differences appear, into the consideration of which it is not necessary to enter minutely on this occasion.

It will, however, be interesting to state that the produce of wheat throughout the department of the Eure is not equal on the whole to quite $18\frac{1}{2}$ bushels to the English acre, and that the return for seed is not greater than sevenfold; results which, judging from the lights we have, may be pronounced by no means equal to those obtained by English farmers. The produce of barley, of which not much is grown in the Department, does not exceed 17 bushels per acre; of oats, not quite $20\frac{1}{2}$ bushels per acre are obtained.

It is acknowledged that the employment of the machinery necessary for the effective performance of the labour suggested in this kingdom must be attended with a considerable expense. It cannot be expected that persons qualified for the collection of such information should be willing to quit, or to neglect, other and gainful employments for this purpose, except on the condition of being paid for their services. It is very probable that in all parts of the country gentlemen might be found every way qualified by education and personal knowledge of the facts, and who might be willing to examine and control the returns when obtained, from the same motive which leads them to devote their time to other labours connected with the public service; but those to whom the task of the collection is assigned must of course be paid. The number of parishes in the three divisions of the United Kingdom exceeds 14,000, and for each one of these, with the exception of town parishes, a paid agent must be employed. Then, too, although gentlemen in the commission of the peace might be willing to superintend the business in their several counties, they could not be expected to act as clerks, or to perform the mechanical part of the labour; and, for this purpose, one person at least in every county must receive payment; in addition to this, the whole body of information, when collected together, would need to be put into form by some competent person with assistants, each of whom must also receive payment for his services. To provide for the correct performance of the work,—and, unless it were accurately given, the information would be of little value,—might require an annual outlay of from 20,000*l.* to 30,000*l.*;—a large sum unquestionably, and, unless some great national advantage were to be gained by it, the government might be thought very improvident that should undertake or authorise such an expenditure. It appears, therefore, necessary to mention some at least of the benefits which must flow from the possession of accurate information upon this most vital subject, and which would impart a character of prudence to such an outlay.

It is now well known that the harvest of 1837 was deficient to so great a degree that, before the produce of 1838 was secured, the great superabundance of the two preceding harvests was all consumed, and the

stock of grain throughout the kingdom was more nearly exhausted than we have known it to be at any period in modern times; so that, if we could not have had recourse to foreign wheat then warehoused in our ports, we must have suffered most severely before the produce of 1838 could have been brought to market. So completely, however, was the public misinformed upon the subject, that, instead of a reasonable advance in price, sufficient to check consumption, which, as regards the most costly grain, wheat, had, it is well known, been long going on with unwonted profusion, the markets fell progressively during the months of August, September, and October, 1837, from 60s. 1d. to 51s. per quarter; and it was not until the middle of the following May that the average was again as high as it had been just before the harvest of 1837. By the third week in August the weekly average price had advanced beyond the rate at which foreign wheat is admitted on payment of the nominal duty of 1s. per quarter. It would not be possible to calculate with any tolerable accuracy the loss in money which this country has sustained through the want of information thus shown with regard to only one year's operations, but we can have no hesitation in believing that its amount must have been at least sufficient, if employed at interest, to provide in perpetuity for every expense that could accompany the most completely organised machinery for collecting agricultural statistics throughout the United Kingdom. If the very considerable purchases of foreign wheat which were suddenly made during the autumn of 1838 in almost every market of Europe, occasioning the prices to be driven up to an exorbitant height, had been made progressively and quietly, without exciting a spirit of wild speculation, which has been productive of subsequent serious losses to many of the importers, no one can doubt that the saving would have been sufficiently great to have borne out the assertion just hazarded. Whether the quality of suddenness, given to the purchases made by us in foreign corn-markets in the autumn of 1838, may not have occasioned an aggravation of the evil under which the money-dealings of the country have since been suffering, is a question as to which different opinions may be entertained. It does not appear unreasonable to conceive that, in proportion as those purchases could have been made to approximate to the conditions of ordinary commercial dealings, so would the derangement which they were calculated to occasion have been diminished, or, to speak more correctly, would not have been produced. The gold which has left our shores in payment for corn will, doubtless, find its way back in exchange for goods, when time shall have admitted of the requisite adjustment. If time, that important ingredient in most human transactions, had been allowed to enter more largely at first into the conditions, that adjustment would, to some extent at least, have accompanied the progress of our dealings.

Our corn-laws were intended, not as a means of acquiring revenue, but wholly for regulation and protection; it may not therefore be right to insist very strongly upon the sums which, under the circumstances just supposed, might have found their way to the Exchequer from this source in 1838, beyond what were actually collected. It may, however, be interesting to state that, if the average rate of duty received upon the foreign wheat and wheat-flour brought into consumption in 1838

had been the same as was received upon that admitted in 1837, the Exchequer would have benefited by the sum of 2,156,596*l.* beyond the amount actually received.* One-fourth part of this sum, if employed at interest, would yield a revenue sufficient for every purpose of inquiry throughout the kingdom.

It would be taking a very narrow view of the subject to limit the advantages of knowledge concerning it to the amount of saving that might be effected under a recurrence of such circumstances as have attended the deficient harvests of 1837 and 1838. The natural, the necessary, tendency of any systematic and comprehensive inquiry, such as might be made by government agents acting under legislative sanction, would be to place the nation, as far as possible, beyond the probability of scarcity. It is well known, by everybody who has made any extensive inquiries concerning the state of agriculture as a science in various parts of the kingdom, that the advances made in some counties have not been hitherto followed in others; and it has been stated, in illustration of this fact, that, if all England were as well cultivated as the counties of Northumberland and Lincoln, it would produce more than double the quantity that is now obtained. To what can this discrepancy be owing, unless it be to the want of information, such as the public agents would collect in each county, and which could not fail to interest deeply every farmer throughout the whole extent of the kingdom? If the cultivators of land, where agricultural knowledge is the least advanced, could be brought to know, upon evidence that would not admit of doubt, that the farmer of Northumberland or Lincolnshire procured, from land of fertility not superior to his own, larger and more profitable crops than he is in the habit of raising, is it likely that he would be contented with his inferiority? The farmers of England have often been accused of an undue preference for the plans and processes employed by their ancestors, and their pertinacity in this respect has been contrasted with the rapidity that accompanies the march of improvement in mechanical and manufacturing processes. The reason for this difference is obvious. Manufacturers, residing in towns, are brought necessarily and constantly into collision; new inventions are continually brought under their notice, so that their results can be tested and judged with the greatest accuracy. Practical agriculturists, on the contrary, live apart; they come together but rarely, and have not that degree of acquaintanceship, the one with the other, which leads them, even when they meet, to the interchange of professional experience. If the result of a successful experiment should at any time reach their ears, they cannot be certain that all the circumstances connected with its prosecution have been faithfully detailed, or that the advantages ascribed to a new method may not be the consequence of accidental causes, such as a propitious season, for instance. Men are

* 1837	Cleared for consumption,	Wheat	232,793 qrs.	Duty	£303,179
	Ditto	Flour	40,187 cwt.	Ditto	3,681
1838	Ditto	Wheat	1,740,806 qrs.	Ditto	136,011
	Ditto	Flour	392,847 cwt.	Ditto	10,522
The duty in 1838, at the same rate as in 1837, would have been—					
		On Wheat	.	.	£2,267,146
		Flour	.	.	35,983
		Difference as above	.	.	£2,156,596.

generally prone to doubt everything that is not presented to their own observation, and this is especially the case with regard to improvements, which imply the mental superiority of others over ourselves. The manufacturer, on the contrary, sees for himself; he is not called upon to take anything upon trust; he can weigh and judge with the minutest accuracy all the circumstances of each case; and what he sees can owe no part of its success to other than human agency; what another has once done, he may always successfully imitate. The tendency of information, such as would be procured by the agency already described, would be in a great degree to remove the disadvantage in this respect under which the farmer now suffers. Results placed before him upon such unquestionable authority, resting not upon a single experiment only, but upon the practice of hundreds of men placed in the same circumstances as himself, must be received by him as undoubted facts, and he must be driven to the adoption of whatever might come thus recommended, with an alacrity equal to that which we see exhibited by the manufacturer.

It is to be feared that the time is yet distant in which various classes of the same community will be willing to make the apparent sacrifice, each one of its own fancied advantages, on the altar of the general good, with the conviction that the share each must obtain of that good will prove an ample compensation for any peculiar benefit that may be relinquished. The contrary principle seems at present to be held with the greatest tenacity. It is besides feared that, if the public should acquire knowledge of any such peculiar advantages, those who possess them would be exposed to have them invaded. The agricultural is, in this country, what is called a *protected* interest; our cultivators, consequently, appear desirous of excluding inquiries which might have the effect of weakening their claim to the continuance of that protection. This fear is altogether chimerical. In Belgium, where the utmost publicity is given to every circumstance connected with the agriculture of the country, it has never been pretended that any advantage has been taken of that publicity; and if this can be truly said of Belgium, where the members of the legislative chambers have not by any means so great, nor so direct, an interest in the landed property of the kingdom as is possessed by the members of our two houses of Parliament, there cannot surely be any reason to dread lest injury should be thus occasioned in England.

The information, which it appears to be so desirable to obtain with reference to the whole kingdom, is already easily procurable with regard to each individual farm by any person who has a sufficient interest to incite him to the task. The landlord, who is interested in extracting a due proportion of the produce of a farm under the name of rent, cannot find much difficulty in correctly estimating that produce. A similar facility attends the operations both of the tithe-proctor and of the parochial tax-gatherer. The knowledge is, in fact, already procurable by every one who can turn it to the disadvantage of the farmer; all that is wanted is to extend the information, so that the farmer himself may be placed in a condition to profit from its possession.

Report on the Condition of the Population in Three Parishes in Rutlandshire, in March, 1839. By the Statistical Society of Manchester.

[*Read before the Statistical Section of the British Association, 26th August, 1839.*]

THE Statistical Society of Manchester, having completed and published an inquiry into the condition of the working classes in several large manufacturing towns in the north of England, were desirous of obtaining similar information with regard to some population differing in character and circumstances from those which they had previously examined. For this purpose they selected three parishes in Rutlandshire, a purely agricultural county, which they conceive may be assumed to afford a fair sample of the whole. The information thus obtained they have arranged in a series of detailed and comprehensive tables, which obviate the necessity of any elaborate comment.

The parish of Branstown, which lies on the western side of the county, contiguous to Leicestershire, contains about 1400 acres, of which more than three-fourths are pasture-land and about one-fourth is arable. It has a population of 102 families, comprising 425 individuals; but there is no resident clergyman, and no resident landlord possessing any extensive property.

The parishes of Egleton and Hambleton (which have been classed together) are situated at a very short distance from Oakham, the county-town, and contain about 2400 acres, which are about equally divided between arable and pasture. The chief part of both these parishes is the property of Mr. Finch, who resides upon his estates, and bears the character of a humane and considerate landlord. The population consists of 100 families, comprising 479 individuals.

The first three tables, A, B, and C, relate to the dwellings of the population, and the account of them is upon the whole very satisfactory. The houses are low, never exceeding two stories; many of them are thatched, and nearly all are built of stone. To each a garden is attached, which is generally of sufficient dimensions to supply the family with vegetables. As there are no cellars, most of the houses have a small dairy or store-room attached, which, however, has not been counted in reckoning the number of rooms in each house. Forty per cent. of the dwellings in Branstown, and 51 per cent. in Egleton and Hambleton, are reported to be *well furnished*. In Manchester and Salford 52 per cent., and in the Dukinfield district 61 per cent., had that character.

The proportion reported to be *comfortable* in each district were—

In Branstown	50 per cent.
Egleton and Hambleton	65 „
Manchester, &c.	72 „
Dukinfield	95* „

The general appearance of the interior of the houses indicated thrifty

* The word “comfortable” must always be a vague and varying epithet, nor is it possible to attach any precise definition to it. Our agent says, “In filling up this column I was guided by observing the condition of the dwelling apart from all consideration of order, cleanliness, and furniture. If I considered it capable of being made comfortable by the tenant, I set it down accordingly; if it was damp, the flooring bad, and the walls ill-conditioned, I reported it uncomfortable.”

poverty, and instances of the squalid misery so frequent in large towns were here extremely rare. In comparing the physical condition of the people in the three parishes, Eggleton and Hambleton appeared to have some slight advantage over Branstown. A reference to Table B will show that, while 31 per cent. of the houses in the former parishes contained 4 rooms, only 17 per cent. in the latter had this advantage. In its amount of sleeping accommodation, also, Branstown is inferior to the neighbouring parishes. From a comparison of these tables with those in a former report it appears that in

Eggleton, &c.	14	per cent. of the families have more than three persons to a bed,
Branstown	19	„ „ „ „
Dukinfield	33	„ „ „ „
Bury	35	„ „ „ „

The rents of the houses in Rutlandshire would appear (Table C) to be very low compared with those in our towns; the difference being apparently nearly double that which would be warranted by the inferior size and accommodation of the dwellings.

		£.	s.	d.
Eggleton, &c.	average yearly rent	2	17	3
Branstown	„	3	0	0
Dukinfield, &c.	„	6	14	0
Manchester, &c.	„	7	11	8

The next series of tables, D, E, F, and G, show the age, sex, occupations, and earnings of the population, and call for no particular remarks.

The proportion of public-houses and beer-shops is to the population

In Branstown	as 1 in	85
Eggleton, &c.	„ „	240

The average weekly wages of the heads of families was ascertained, after some difficulty, with tolerable accuracy. The amount appears to vary from 9s. 7d. in Branstown to 10s. 8d. in Eggleton and Hambleton; and about one-fourth of the individuals under 21 years of age are reported to be earning wages. In the manufacturing towns previously examined by the Society it was found impracticable to ascertain from the persons employed the average amount of their earnings; and, as statisticians, we do not feel at liberty to hazard a conjecture which we are not able to substantiate. We know, however, that in those districts one-third of the minors are in the receipt of wages.

Considerable pains were taken by our agent to obtain a comparison of the rate of wages in Rutlandshire at the present day and ten years ago; but, after the examination of about 80 cases, it was found that the information obtained was not sufficiently precise or certain to warrant the Society either in publishing it or in drawing any conclusions from it.

The state of education in these parishes is fully detailed in the Report on the Schools of Rutlandshire.* We shall therefore merely give a summary corresponding to that published in our former Report on the Condition of the Population in the Manufacturing Districts. We do not, however, wish much reliance to be placed upon the comparison which we have drawn out, as the inquiry into these points in the manufacturing districts was not fully sifted. Tables H and I give the following results:—

* See page 303.

	Able to read.	Able to write.
Braustown	75 per cent.	44 per cent.
Egleton, &c.	81 „	50 „
Manchester, &c.	50 „	— „
Dukinfield, &c.	53 „	28 „

Proportion now at day-schools.

Braustown	11 per cent.
Egleton	19 „
Manchester, &c.	12 „
Dukinfield, &c.	6 „

Table K relates to the religious profession of the heads of families in the parishes of Rutlandshire, and needs no comment. In Egleton, where there is a resident clergyman, the establishment claims 82 per cent. of the population, and in Braustown, where it is destitute of this advantage, only 73 per cent.

In conclusion, we may observe that the visitation of the houses of the labouring poor in Rutlandshire, and the observation of their language, manners, and habits, leave a favourable impression with regard to their moral condition. Swearing and drunkenness are far from common, and the general conduct of the people is marked by sobriety, frugality, and industry. Their education has been but limited, nor has their intelligence been very highly developed; and, though few dwellings were found entirely without books, yet these were far from being either numerous or well-selected, and were almost exclusively confined to religious subjects.*

TABLE A.—Number and Condition of the Dwellings:—

Number of Dwellings.	Braustown.	Egleton and Hambleton.
Houses	97	†95
Chambers	5	5
Total	102	100
Condition of Dwellings.		
Number of dwellings well furnished . . .	41	51
„ tolerably furnished . . .	38	36
„ ill furnished	23	13
„ clean	58	70
„ tolerably clean	33	27
„ dirty	11	3
„ comfortable	51	65
„ tolerably comfortable . . .	38	28
„ uncomfortable	13	7
„ with ample supply of water . . .	43	42
„ insufficient do.	23	31
„ no supply	4	3
„ not ascertained	32	24
„ with adequate drainage . . .	15	28
„ inadequate drainage . . .	29	31
„ no drainage	25	18
„ not ascertained	33	23

* Among the most common were Fox's Martyrs, Fleetwood's Life of Christ, and Venn's Whole Duty of Man.

† One of these is only a hut or cabin.

TABLE B.—Number of Rooms, and Number of Beds in each Family:—

	Number of Individuals of which each Family consisted.	Number of Families, distinguishing the number of Rooms which each has in its Dwelling.															
		Parish of Branstown.								Parishes of Eggleton and Hambleton.							
		Number of Rooms.								Number of Rooms.							
		1	2	3	4	5	6	Not ascertained.	Total.	1	2	3	4	5	6	Not ascertained.	Total.
Rooms.	1 or 2	2	8	2	4	..	..	4	20	1	4	4	6	1	1	4	21
	3	1	7	6	2	..	..	4	20	1	4	4	8	..	..	1	18
	4	..	9	3	4	..	1	10	27	..	6	1	4	1	2	3	17
	5	..	1	1	2	1	..	7	12	..	..	2	4	2	1	2	11
	6	..	1	2	2	1	..	2	8	..	1	1	3	2	..	5	12
	7	..	..	2	2	1	..	2	7	..	2	..	1	2	..	1	6
	8	..	1	1	..	..	..	3	5	..	1	..	..	1	1	..	3
	9	..	..	..	2	..	..	1	3	..	..	1	2	..	1	1	5
	above 9	..	..	..	..	..	..	..	..	..	..	..	3	1	..	3	7
Total . .		3	27	17	18	3	1	33	102	2	18	13	31	10	6	20	100
Beds.	Number of Families with 1 person to a bed . .	..	..	..	..	..	..	..	18	..	..	..	..	..	..	..	20
	Do. 2 do. . . . .	..	..	..	..	..	..	..	29	..	..	..	..	..	..	..	23
	Do. 3 do. . . . .	..	..	..	..	..	..	..	14	..	..	..	..	..	..	..	13
	Do. 4 do. . . . .	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	1
	Not ascertained . . . . .	..	..	..	..	..	..	..	36	..	..	..	..	..	..	..	43
Total . .		..	..	..	..	..	..	..	102	..	..	..	..	..	..	..	100

TABLE C.—Annual Rent of Dwellings:—

Number of Dwellings paying a Yearly Rent.			Parish of Branstow.			Parishes of Eggleton and Hambleton.		
£.	s.	d.	£.	s.	d.			
Of 1	0	0, and not exceeding	1	10	0	2	5	
Of more than 1	10	0	2	0	0	13	2	
2	0	0	2	10	0	5	2	
2	10	0	3	0	0	13	2	
3	0	0	3	10	0	5	7	
3	10	0	4	0	0	3	..	
4	10	0	5	0	0	6	1	
6	10	0, and upwards	..	..	..	1	1	
Rent free	..	..	..	..	..	1	2	
* Not ascertained	..	..	..	..	..	53	78	
Total . .			102			100		
Average ascertained			£3 0 0			£2 17 3		

* The greater proportion of these were farms, or cottages, with land attached, under the same rent-charge.

TABLE D.—Number and Ages of the Population:—

Parishes.	Adults.			Above 12 and under 21 years.			Under 12 years.			Total Population.	Average to a Family.
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.		
Branstown .	120	117	237	38	32	70	54	64	118	425	4.17
Egleton and Hambleton }	121	125	246	52	46	98	72	63	135	479	4.79

TABLE E.—Occupations of Adults:—

Nature of Occupations.	Branstown.			Egleton and Hambleton.		
	Males.	Females.	Total.	Males.	Females.	Total.
Agricultural and other out-door employment . . }	56	1	57	50	..	50
Farmers and graziers . . .	26	..	26	32	5	37
Employed at home . . .	4	6	10	4	5	9
Building trades	7	..	7	7	..	7
Clothing trades	5	..	5	3	..	3
Mechanics and handicrafts .	5	..	5	3	..	3
Shopkeepers and retailers .	5	2	7*	4	..	4
Licensed victuallers . . .	2	..	2	2	..	2
Domestic servants . . . .	..	9	9	1	6	7
Professional	3	2	5	1	..	1
Miscellaneous . . . . .	..	..	..	4	..	4
Total employed in business	113	20	133	111	16	127
Not employed	7	97	104	10	109	119
Total adult population .	120	117	237	121	125	246

TABLE F.—Occupations of Minors:—

Nature of Occupations.	Branstown.			Egleton and Hambleton.		
	Males.	Females.	Total.	Males.	Females.	Total.
Agricultural and other out-door employment . . }	19	..	19	32	..	32
Farmers and graziers . . .	6	..	6	5	..	5
Employed at home	2	3	5	1	..	1
Building trades	2	..	2	3	..	3
Clothing trades	3	1	4	..	..	..
Mechanics and handicrafts .	3	..	3	..	..	..
Domestic servants . . . .	..	14	14	1	13	14
Total employed in business .	35	18	53	42	13	55
Not employed	57	78	135	82	96	178
Total	92	96	188	124	109	233

* Three of these are retail brewers.

TABLE G.—Weekly Earnings of Heads of Families and Lodgers:—

Rate of Weekly Earnings.	Number of Heads of Families and Lodgers.	
	Branstown.	Egleton and Hambleton.
3s. 6d.	1	2
5s.	2	1
6s.	1	..
7s.	5	1
8s.	1	1
9s.	9	2
10s.	3	9
11s.	5	..
12s. and upwards	6	30
Work by the piece	17	3
Engaged on their own account . .	49	52
Paupers	4	..
Wages not ascertained	9	1
Total	112	102
Average wages per week	9s. 7d.	10s. 8d.

TABLE H.—Acquirements of the Population with regard to Education:—

Ages of the Population.	Branstown.				Egleton and Hambleton.			
	Read.	Write.	Cipher.	Sew.	Read.	Write.	Cipher.	Sew.
Minors under 21	106	49	20	53	156	73	38	61
Adults	214	136	88	118	231	158	95	114
Total	320	185	108	173	387	231	133	175

TABLE I.—Number of Children *now* at School:—

Ages.	Branstown.	Egleton and Hambleton.
Under 5 years	3	13
5 years and under 10	32	54
10 „ „ 15	11	22
15 „ „ 21	2	1
Total	48	90

TABLE K.—Religious Profession of Heads of Families and Lodgers:—

Religious Profession.	Branstown.	Egleton and Hambleton.
Church of England	82	82
Protestant Dissenters	12	14
Professing to worship among various denominations	11	4
Making no religious profession	6	2
Not ascertained	1	..
Total	112	102

Report of a Committee of the Manchester Statistical Society on the State of Education in the County of Rutland in the year 1838.

[*Read before the Statistical Section of the British Association, 27th August, 1839.*]

THE districts heretofore examined by the Manchester Statistical Society, with a view to ascertain the state of education, have for the most part been considerable towns; and in some of them a very rapid increase of population had evidently not been met by any corresponding or adequate expansion of established institutions. The Society, therefore, selected for their next inquiry an agricultural district, where a very slight growth of population had taken place, and where, consequently, many more favourable results might be expected, especially as regards the adequacy of the existing means for educating the people.

The county of Rutland, being the district selected, was carefully examined in the year 1838, and the accompanying tables contain a minute analysis of the results of the inquiry.

The small size of the parishes is one of the first things which attracts attention on comparing Rutlandshire with the county of Lancaster, there being in the former a parish church for every 400 inhabitants. Another difference is, that in Rutlandshire there is little or no Roman Catholic population, which appears from the circumstance that no places of worship or Sunday-schools connected with that denomination were met with. Estimating the members of other denominations by the number of churches or chapels, and the number of Sunday-scholars, (which may probably afford a fair criterion), it would appear that about two-sevenths of the population belong to various sects of Protestant Dissenters, amongst whom the Wesleyan Methodists preponderate, while the remaining five-sevenths are connected with the Church. In Lancashire, on the other hand, the numbers attending Dissenters' Sunday-schools decidedly preponderate over those attending the church schools, the latter containing in Liverpool about 41 per cent., and in Manchester only 31 per cent. of the whole number.

The returns of schools obtained by the government in 1833 appear to have been made more accurately in this county than in any place previously examined by the Society. One error we take this opportunity of correcting, viz.: ten *infant schools* are reported, whereas there is not in the whole county a single school of the class which bears this title; the ten schools in question are mere dame-schools.*

The population of Rutlandshire was, in 1811	16,380
It had increased 13 per cent. between that date and 1821, when it was .	18,485
But in the following decennial period the increase was only 5 per cent.,	
the population in 1831 being (males, 9,721—females, 9,664) . . .	19,385

It is to be presumed, therefore, that 20,000 will be a fair estimate in round numbers of the present population. Of this number 5,000 must of course be children between 5 and 15 years of age, of whom 3,561 were found to be in attendance either at day or Sunday schools, leaving 1,439, or about 29 per cent., not receiving school instruction.

* It is impossible to expect accuracy in returns obtained by circulars, various constructions being put upon the same question by different individuals, who consequently classify their replies upon various principles. The government seems now to be perfectly aware of this difficulty, for Lord John Russell, in presenting the returns of schools this session, acknowledged the little dependence that could be placed on their accuracy.

Taking the scholars of *all* ages,

1,117, or about 5·6 per cent. of the population, attend day and evening schools only.

1,922, or about 9·6 per cent. of the population, attend *both* day and Sunday schools.

1,274, or about 6·4 per cent. of the population, attend Sunday-schools only.

4,313

Numbers alone afford a very imperfect test of this subject, as so much depends in education upon the *character* and *quality* of the instruction imparted; but, before proceeding to comment upon the latter point, we may premise that, comparing the number of scholars with the population in Rutlandshire and in other places examined by the Society, the following rank may be assigned to each:—

<i>Sunday Schools.</i>				<i>Day and Evening Schools.</i>			
Manchester and Salford	.	.	17	York	.	.	17
Rutlandshire	.	.	16	Rutlandshire	.	.	15
York	.	.	12	Liverpool	.	.	13
Liverpool	.	.	6	Manchester and Salford	.	.	10

According to this valuation the palm must be conceded to York and Rutlandshire, over either Manchester and Salford or Liverpool; for although inferior to Manchester in the number and efficiency of the Sunday-schools, they supply a more general day-school instruction than is found to exist in Manchester by at least 50 per cent.; and although not more than 20 to 30 per cent. better than Liverpool in the relative number of day-scholars, yet the Sunday-school instruction is in more than double the proportion.

As, however, Sunday-schools very rarely profess to give secular instruction, we shall pursue the comparison only in reference to the day-schools.

The proportion of superior private and boarding schools in Rutlandshire is small, as compared with Manchester or Liverpool; in York they bear a larger proportion to the total population than in either of those towns. This is a class of schools respecting which the Society has never made any minute reports, and we therefore proceed to those of an humbler class.

The dame and common schools are attended

In Liverpool, by	5·17 per cent.	} of the population.
„ Rutlandshire, by	6·25 „	
„ Manchester and Salford, by	6·52 „	

There are as many endowed or charity schools in Rutlandshire as there are parishes; and, comparing the proportion of the population educated in these different places out of charitable funds and endowments, we find:—

2·45 per cent. of the population of Manchester and Salford.

5·87 „ of the population of Liverpool.

8·26 „ of the population of Rutlandshire.

York has a still larger proportion of charity and endowed schools, as they contain 9·63 per cent. of the population; while it is the lowest in self-supporting schools, in which there are only 4·77 per cent. of the population.

It appears by the preceding calculations that the people do nearly as much for themselves in Rutlandshire as they do in Manchester, notwithstanding the more extensive endowment of their schools.

In a separate examination of three parishes in Rutlandshire carried on from house to house,* the larger attendance of children at school in that county was confirmed, and it also appeared that the average time of their remaining at day-schools was greater than in Lancashire. In Pendleton, near Manchester, one-third only of the children appeared to remain at school above five years, and one-third remained less than three years; while, in the three parishes of Rutlandshire which were visited, it was found that, of the children who had left school, one-half had remained there above five years.

Charity Schools.—There are many schools belonging to this class in Rutlandshire; but, as regards their management and efficiency, the majority are only on a par with dame and common day schools.† The parties who contribute by subscription to their support appear, with few exceptions, to take little further interest in their welfare.

Like the scholars in common day-schools, the majority leave before or about the age of 12. The usual great holiday is in harvest, when the children are able to earn wages. In none of these schools were found any industrial occupations; but in the Union Workhouse schools something of this kind was said to be contemplated.

The teachers generally bear irreproachable characters, which has doubtless much influence on the character and deportment of the population, whose manners appeared exceedingly orderly and respectful.

Dame Schools.—In the dame-schools it was very gratifying to observe the marked difference in general appearance and order, as compared with schools of a similar class in large towns. The mistresses are almost invariably persons of good moral character, of quiet, orderly habits, cleanly in their habitations, decent in their personal appearance, and of respectful deportment. The scholars too, except in one or two instances, were found clean and tidy, however mean their attire, and generally remained orderly and quiet during the visit. The rod or cane is much less in use than in the towns formerly examined, though it usually forms part of the furniture of the school. The girls were generally found sewing or knitting, and in many schools the boys learn to knit.

A Society for the promotion of industry, supported by subscription, exists in the county; and prizes are given to those children who, according to their age, have performed the most work during the year. This excites a great competition as to which village shall produce the Queen of the Knitters, or the Queen of the Sewers, and many ladies in the county consider the Society to have great influence in inducing habits of diligence and order. The moral effect is no doubt good, and a greater interest in the lower class of schools is also thereby created amongst the gentry.

Very few of the dames pretend to do more than they are competent to perform. They labour, with the few books they possess, to initiate the scholars in the mystery of spelling, or even carry them so far as to read a little, but here they stop.

Common Day-Schools.—The remarks on the superior condition of

* See Report on the Condition of the Population in Three Parishes in Rutlandshire, p. 297.

† This will be observed on examination of the Tables: in two-thirds of these schools no books are provided for the scholars, except such as the parents may send.

the dame-schools equally apply to these; and, taken altogether, the common schools appear to be nearly as efficient as the charity-schools.

During harvest-time the attendance of the children is generally much lower than at other seasons of the year. Some of these schools, and of the charity-schools, were, in fact, closed for four weeks at this season, which was also found to be the case in the National and Lancasterian schools at York. The attendance, however, is at no time very regular, as the scholars are frequently detained at home, or sent to assist in outdoor work. Those residing at a distance are frequently kept away for two or three months during winter, and others are withdrawn during seed-time, for employment in "bird-frightening."

Want of books is a very serious impediment to the usefulness of these schools. None, however, were found so totally destitute of books as in some other places, but nearly all complained of difficulties arising from this cause. The general understanding is, that parents shall provide books; but this is so generally neglected, that teachers are under the necessity of providing the cheapest they can procure, without regard to their being suitable; or else, such books as a few more favoured scholars may bring are used for the whole school.

In some of the more thinly peopled parts of the county the teachers find it very difficult to carry on the business of the school at all.

Sunday Schools.—There are 53 parishes and 2 hamlets in the county, of which 46 have at least one Sunday-school, leaving only 7 parishes and 2 hamlets without one.

The average attendance fluctuates much, particularly in those schools which are held in churches. In these cases very few scholars attend during the depth of winter, which is probably in many instances owing to their being deterred by the cold.

There is in almost every parish one school attached to the Church of England, and sometimes two, of which one is confined to boys, and the other to girls and the very young boys. The teachers are generally paid, and most frequently they are masters or mistresses of day-schools. One of the Sunday-schools is kept by a female, who provides a room for the scholars, and receives *6d.* per week. Two or three are conducted by ladies or gentlemen residing in the parish without charge, and a few of the paid teachers are occasionally aided in a similar manner. Most of them receive an occasional visit from the clergyman, but, excepting in one or two cases, there is no systematic visitation. Although the majority profess to use the Scriptures in school, time rarely allows more than an opportunity of learning the Collect, repeating the Catechism, or reading from the Prayer Book the Gospel of the day.

The small attendance at Sunday-schools is remarkable, when contrasted with that which is found to exist in the more populous districts of Yorkshire and Lancashire. This may be partly occasioned by the early age at which both males and females enter service. It has also been a custom for the children to discontinue their attendance at the age of 12 or 13; and some, who were questioned as to the cause, said they "felt shame to go." Farm-servants will always have a greater difficulty in continuing to attend Sunday-schools than the young people in towns, as they have duties which require to be performed on Sunday, as on any other day; and on Sunday these duties frequently devolve in a greater degree than usual upon the younger servants.

These details exhibit, to any one conversant with the Sunday-schools of Manchester and Salford, the great inferiority of those in Rutlandshire. The reverse, however, holds good when comparing the dame and common schools in that county with those in Manchester or Liverpool, although they also would admit of immense improvement.

Pains should be taken to introduce amongst them a sufficient supply of good school-books, which are almost equally needed in the charity-schools; but all exertions to improve the present system of education will prove of small avail until a class of teachers shall be properly and systematically trained for discharging the important duty of bringing up the youth of this country.

Day and Evening Schools.

TABLE I.—Summary of Schools, and of Children receiving Education, exclusive of Sunday Schools.

Description of Schools.	Number of Schools.	Number of Teachers.		Number of Scholars.			Number who attend Sunday Schools.
		Regular.	Occa-sional.	Boys.	Girls.	Total.	
Dame Schools	50	50	..	277	401	678	316
Common Day Schools for Boys .	8	9	..	186	46	232	120
Girls .	17	19	..	86	222	308	159
Superior Private and {Boys.	6	6	..	81	..	81	..
Boarding Schools for . {Girls.	3	5	3	4	51	55	1
Total Supported solely by Parents	84	89	3	634	720	1,354	596
Charity and Public Schools .	49	57	7	941	669	1,610	1,300
Total Day Schools .	133	146	10	1,575	1,389	2,964	1,896
Evening Schools	4	4	..	24	9	33	2
Charity Evening Schools* .	3	3	5	42	..	42	24
Total Day and Evening Schools	140	153	15	1,641	1,398	3,039	1,922†

TABLE II.—Date of Establishment.

Date.	Dame.	Common.		Superior.		Charity and Public.		Evening.	Total.
		Boys.	Girls.	Boys.	Girls.	Day.	Evening.		
Before 1801 . . . . .	..	..	2	..	..	14	1	..	17
1801 to 1810	5	..	..	..	..	6	..	..	11
1811 to 1820	6	..	3	1	..	10	..	..	20
1821 to 1830	12	3	5	..	1	6	..	1	28
Since 1830	27	5	7	4	2	13	2	3	63
Not ascertained .	..	..	..	1	..	..	..	..	1
Total	50	8	17	6	3	49	3	4	140

* These are attached to Charity Day Schools, two being conducted by the same teachers, and one by the vicar of the parish, aided by some of his private pupils.

† Of this number 134 are under 5 years of age, 1775 between 5 and 15, and 13 above 15 years.

TABLE III.—Statement of the Mode in which the Schools are Supported.

	Number of Schools.	No. of Scholars.		
		Boys.	Girls.	Total.
FREE.—No part of the expense being borne by the scholars.				
Clothes, board, and education provided.....	2 ³	20	6	26
Education only provided	34†	402	228	630
Ditto Grammar School, Oakham	1	4	..	4
NOT FREE.—Part of the expense being borne by the Scholar.				
Charity Schools	14†	255	289	544
Scholars attending Free Schools who pay.....	..	253	146	399
Grammar School, Uppingham	1	19	..	19
Scholars attending Grammar School, Oakham, who pay.....	..	30	..	30
Do.—The whole expense being borne by the Scholars.				
Dame, Common and Superior Day Schools, Board- ing and Evening Schools.....	87	658	729	1,387
Total.....	139	1,641	1,398	3,039

* Union workhouse schools, Oakham, being supported out of the poor's rates.

† Of this number, 10 are supported by specific endowment; 19 by subscriptions, one of which is an evening school; 5 by private charity, one of which is an evening school; and one partly by endowment and partly by private charity.

‡ One of these is supported by endowment, 7 by subscription, and 6 by private charity.

TABLE IV.—Statement of the weekly Charge for Instruction in Schools supported by payments of the scholars, exclusive of superior schools.

Weekly Charge.	Dame Schools.		Common Day Schools.				Evening Schools.	
			Boys.		Girls.			
	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.
2d.	7	57	..	..	..	..	..	..
3	25	331	..	..	2	57	..	..
4	17	260	..	..	2	46	1	9
6	1	30	3	66	6	85	3	24
7	..	..	..	..	3	36	..	..
8	..	..	3	95	1	26	..	..
9	..	..	..	..	1	21	..	..
10	..	..	1	60	1	30	..	..
Total .	50	678	7	221	16	301	4	33
Average charge	3½d.		7½d.		6½d.		5½d.	

In two common day-schools the information could not be obtained.

In the dame-schools the highest charge made in each case for instruction in reading and needle-work has been taken in forming the above Table.

In common day-schools, and in evening schools, the highest charge made in each case for instruction in reading, writing, and arithmetic (including plain needle-work) has been taken.

An additional charge of 3d. per week is made for instruction in grammar, geography, or mensuration, in the few schools in which these subjects are taught.

TABLE V.—Statement of the Ages of the Children.

Schools.	Under 5 years.	Between 5 and 15 years.	Above 15 years.	Total.
Dame	249	429	..	678
Common, boys'	19	213	..	232
„ girls'	58	250	..	308
Superior private and boarding (boys')	1	73	7	81
„ „ „ (girls')	3	52	..	55
Charity, day	154	1,419	37	1,610
Evening . . . . .	..	13	20	33
Charity, evening . . . . .	..	21	21	42
Total	484	2,470	85	3,039

TABLE VI.—Method of Instruction professed to be pursued.

	Dame.	Common.		Superior.		Charity and Public.		Evening
		Boys.	Girls.	Boys.	Girls.	Day.	Evening	
Out of the total number of	50	8	17	6	3	49	3	4
The scholars are classed in	6	6	2	3	22	..	..
The monitorial system is adopted in	1	..	..	21	..	..
The scholars are questioned systematically in what they learn in	4	3	1	1	1
Do. do. partially in	1	2	1	..	..	8	..	..
There are appointed visitors in	7	..	..
„ Occasional do. in	2	..	..
There are periodical examinations { annual in	1	..	..
half-yearly in	3	..	..
every 4 months in	1	..	..
There are occasional examinations in	3	..	..
Maps and Globes are used in	5	1	2	..	..
Maps only are used in	1	2	1	2	..	..	..

It is, of course, to be understood that, with regard to each method, the contrary system is adopted in the remaining schools.

In one charity, and one common, girls' school, the information was refused. In two superior boys' schools it was refused with regard to the questioning of the scholars, and in one with regard to the classes.

TABLE VII.—Discipline of the Schools.

Corporal punishments are inflicted in 42 dame, 8 common boys', 5 common girls', 1 superior boys', 46 charity day, and 2 charity evening schools.

The scholars are punished by tasks in 2 superior girls' schools, and by confinement in 1 charity day school.

No punishments are resorted to in 8 dame, 11 common girls', 2 superior boys', 1 charity day, 1 charity evening, and in the 4 evening schools.

The information could not be obtained in the remaining schools.

Rewards of books are given in 1 dame, 1 common girls', and 1 charity school. Various prizes are given in 1 superior boys', 1 superior girls', and 1 charity day school. The information was not obtained from 2 common, 1 superior, and 2 charity schools. In the remaining schools no rewards were given.

There is neither a lending library nor a benefit or clothing society attached to any day or evening school in the county.

TABLE VIII.—Subjects professed to be Taught in each Class of Schools.

Subjects.	Date.	Common.		Superior.		Charity and Public.		Evening	Total.
		Boys.	Girls.	Boys.	Girls.	Day.	Evening		
Out of the Total No. of	50	8	17	6†	3	49	3	4	140
Reading . . .	50	8	17	5	3	49	3	4	139
Writing . . .	..	8	17	4	3	29	3	4	68
Arithmetic . . .	..	8	10	4	3	27‡	2	4	58
Sewing . . .	39	5	17	..	3	31	1	..	96
Knitting . . .	43*	4	12	..	..	31	..	..	90
Grammar . . .	..	4	5	5	3	3	..	..	20
Geography . . .	..	3	4	5	3	3	..	..	18
History . . .	..	2	2	5	3	3	..	..	15
Mensuration . . .	..	..	..	5	..	2	..	..	7
Mathematics . . .	..	..	..	4	..	2	..	..	6
Drawing . . .	..	..	..	4	2	2	..	..	8
Music . . .	..	..	..	..	2	2	..	..	4
Modern Languages	..	..	..	3	1	2	..	..	6
Classics . . .	..	..	..	6	..	2	..	..	8
Morals . . .	..	5	11	6	3	47	2	..	74
Religion, viz.:—									
Church Catechism	32	4	14	..	..	8	..	..	58
Watts' Do. . .	1	..	..	..	..	..	..	..	1
Instruction . . .	16	2	1	6	3	41	2	..	71

* In 22 of these schools the boys are taught to knit.

† One of these consists of a few private pupils who are preparing for the university, and one is a preparatory boys' school kept by a lady.

‡ In one of these schools the four first rules only are taught.

TABLE IX.—Locality, Accommodations, and Order of the Schools, with the way in which Books are provided.

	Date	Common.		Superior.		Charity and Public.		Evening	Total.
		Boys.	Girls.	Boys.	Girls.	Day.	Evening		
Out of the Total Number of	50	8	17	6	3	49	3	4	140
With a school-room . . .	1	7	5	5	3	32	3	2	58
School held in a kitchen or sitting-room*	49	1	11	..	..	17	..	2	80
Having seats for all the scholars	49	8	16	3	3	49	3	4	135
Having seats for only part of the scholars	1	8	..	..	..	..	..	..	9
With a play-ground . . .	..	..	..	4	1	6	1‡	..	12
Without „ . . .	50	8	16	1	2	42	2	4	125
Orderly	35	3	12	2	3	45	..	2	102
Ditto middling	4	4	3	..	..	1	..	..	12
Disorderly	11	..	..	..	..	1	..	..	12
Books supplied by parents .	41‡	8	17	6	3	33	3	4	115
„ teacher . . .	7‡	..	..	..	..	1	..	..	8
„ either. . .	2‡	..	..	..	..	..	..	..	2
„ charity . . .	..	..	..	..	..	13	..	..	13
„ poor-rates . . .	..	..	..	..	..	2	..	..	2

NOTE.—In a few schools the information could not be obtained.

* In a majority of these cases the room is used for both purposes.

† Several of these were nearly destitute of books.

‡ An evening-school attached to, and held in, the National school-room at Oakham.

TABLE X.—Physical Condition of the Schools.

Description of Schools.	Total.	Not ascertained.	Total ascertained.	State of Cleanliness.			Ventilated.			Lighted.		
				Clean.	Middling.	Dirty.	Well.	Middling.	Ill.	Well.	Middling.	Ill.
Dame.....	50	..	50	39	3	8	14	12	24	5	34	11
Common Boys'....	8	..	8	6	2	..	1	3	4	..	7	1
„ Girls'....	17	1	16	14	2	..	9	5	2	7	5	4
Superior Boys'....	6	3	3	3	..	..	1	2	..	3	..	..
„ Girls'....	3	..	3	3	..	..	2	1	..	2	1	..
Charity, &c.	49	1	48	44	4	..	34	10	4	..	2	..
Evening.....	4	2	2	1	1	..	..	1	1	32	13	3
Charity Evening ..	3	..	3	2	1	..	2	1	..	2	1	..
Total.....	140	7	133	112	13	8	63	35	35	51	63	19

TABLE XI.—Information relative to the Teachers.

	Dame.	Common.		Superior.		Charity and Public.		Evening.	Total.
		Boys.	Girls.	Boys.	Girls.	Day.	Evening.		
Out of the Total Number of Teachers.*	50†	8	17	6	3	49	3	4‡	140
No other occupations	42‡	6	16	3	3	45	2	2	119
With other occupations	8	2	..	3	..	3	1	2	19
Years engaged in teaching, viz.									
Less than 1.....	2	..	..	..	..	2	..	1	5
1	7	2	1	..	1	4	..	..	15
2	4	..	..	..	..	3	..	..	7
3	1	..	..	..	..	3	..	1	5
4	3	..	..	..	..	2	..	..	5
5	6	..	2	..	1	2	1	..	12
6	4	1	1	..	..	1	..	..	7
7 and upwards	23	5	12	3	1	29	2	..	75
Place of birth, viz. England	50	8	16	6	3	49	2	4	138
Education, viz.									
For the employment	1	2	2	..	1	12	1	1	20
Household duties.....	27	..	10	1	2	11	..	..	51
Servitude	20	..	2	..	..	10	..	1	33
Other employments. See Note.¶	2	6	1	3	..	9	..	2	23
Religious profession, viz.									
Church of England.....	32	5	10	5	3	46	3	2	106
Dissenters.....	16	3	7	1	..	3	..	2	32
No profession.....	2	..	..	..	..	..	..	..	2

NOTE.—When the figures do not agree with the total numbers, the information could not be obtained.

* The above information refers only to the principal teacher in each school.

† Of the mistresses of these schools, 24 represented themselves as having undertaken the office of teacher for a maintenance, 5 to aid their husbands, 5 because they were widows, 4 from poverty or misfortune, 2 by request of neighbours, 2 from infirmity, 2 from the illness of relatives, 1 "because other trades failed," and 4 assigned no cause.

‡ One of these receives 1s. 6d. per week from the Union.

§ Two of these are kept by teachers of day-schools, one by a labourer, and one by a butcher.

¶ Viz.—one tailor, one sempstress, one bonnet maker, two shoemakers, four shopkeepers, one labourer, one butcher, seven farmers, and five clergymen.

SUNDAY SCHOOLS.

TABLE I.—Summary of Sunday Schools and of Scholars on the books, and in average attendance.

Religious Denominations.	No. of Schools.	Number of Teachers.	Scholars.						Average attendance. (a)	Per centage of number on the books in average attendance.	Average Number of Scholars in attendance to a school.
			Age.			Sex.		Total Number on the books.			
			Under 5.	Between 5 and 15.	Above 15.	Boys.	Girls.				
Church of England	55(b)	112(c)	229	2,077	13	1,221	1,098	2,319	1,850	79.8	34
Wesleyan . . .	6	56	36	353	..	177	212	389	303	77.9	50
Independent . . .	4	42	23	236	..	132	127	259	196	75.7	46
Baptist . . .	2	17	19	104	6	70	59	129	99	69.7	45
General Baptist . .	2	12	13	87	..	50	50	100	90	99.0	45
Total . .	69	239	320	2,857	19	1,650	1,546	3,196	2,529	79.1	37

(a) As many of the schools keep no account of the attendance, the average has been in these cases made according to the judgment of the respective teachers.

(b) In one of these schools, with 29 scholars, the total number on the books was returned as being the average attendance. The reason assigned for this punctuality was, that the scholars are punished in case of absence.

(c) Two of the Church of England schools have a few occasional teachers, who have not been included in this number, as their attendance is very irregular.

TABLE II.—Size of Sunday Schools.

Number of Sunday Schools in which

the number on the books does not exceed 50	50
Do. exceeds 50, and is not above 100	17
Do. exceeds 100	2
	— 69
The average does not exceed 50	60
Do. exceeds 50, and is not above 100	7
Do. exceeds 100	2
	— 69

TABLE III.—Date of Establishment.

Established.	Schools.	Scholars.			Average Attendance.
		Boys.	Girls.	Total.	
In and before 1820	49	1,341	1,224	2,565	2,007
1821 to 1830 inclusive	8	117	128	245	193
Since 1830	12	192	194	386	329
Total	69	1,650	1,546	3,196	2,529

TABLE IV.—Number of Scholars to a Teacher.

Number of Scholars to one Teacher.	Church of England.			Dissenters.		
	Schools.	Teachers.	Scholars.	Schools.	Teachers.	Scholars.
Not above 10	8	29	208	14	127	877
From 10 to 25	23	53	927	..	..	..
From 26 to 50	(a) 22	27	978	..	..	..
From 51 to 100	2	3	206	..	..	..
Total	55	112	2,319	14	127	877

(a) See note (c) to Table 1.

TABLE V.—Employment of School Hours.

Total Time in School.	Time devoted to direct instruction.					Total No. of Sunday School's.
	Less than 2 hours.	2 and under 3 hours.	3 and under 4 hours.	4 and under 5 hours.	5 and under 6 hours.	
Less than 2 hours	1	..	..	..	..	1
2 and under 3 hours	2	8	..	..	..	10
3 and under 4 hours . . . .	..	19	17	..	..	36
4 and under 5 hours . . . .	..	2	10	5	..	17
5 and under 6 hours . . . .	..	..	2	2	..	4
6 hours and upwards . . . .	..	..	..	..	1	1
Total No. of Sunday Schools	3	29	29	7	1	69

TABLE VI.—Subjects Taught in the Schools.

Subjects Taught.	Schools.	Scholars.			Average Attendance.
		Boys.	Girls.	Total.	
Out of the total number of . .	69	1650	1546	3196	2,529
Reading, Religion, and Morals, taught in	69	1650	1546	3196	2,529
Writing taught in	3	94	36	130	101
Singing taught in	2	41	21	62	46

TABLE VII.—General Conduct of the Schools.

	Number of Schools.	Number of Teachers	Scholars.	
			Total on the Books.	Average Attendance.
Out of the total number of	69	239	3196	2,529
With appointed visitors	11	35	559	430
With occasional visitors	1	1	46	46
With half-yearly examinations	1	2	99	82
With occasional examinations	2	22	156	119
Upon the monitorial system	12	16	592	489
Where the scholars are systematically questioned on what they read and learn	10	87	630	514
Where the scholars are occasionally questioned on what they read and learn	5	22	386	290
Attached to charity schools, and conducted by the same teachers	41	83	1800	1452
Not attached to charity schools, and conducted by paid teachers	11	22	432	319
Not attached to charity schools, and conducted by gratuitous teachers	17	134	964	758

TABLE VIII.—Discipline of the Schools.

	Church of England.	Dissenters	Total.
Out of the total number of . .	55	14	69
Corporal punishments are inflicted in	33	5	38
Rewards of books are given in	14	10	24
Do. in money do.	3	..	3
Do. in books and money do.	1	..	1
No rewards are given	37	4	41

SUNDAY SCHOOLS.

TABLE IX.—Libraries and Societies attached to the Schools.

There are Lending Libraries attached to 8 Sunday schools, containing 404 scholars. There is not any Evening School, Benefit Society, or Savings' Bank, attached to any. In some of the parishes there is a Clothing Society, but it has no connexion with the Sunday School.

TABLE X.—Manner in which conducted, whether by paid or gratuitous Teachers, whether connected with Charity Schools, and whether the attendance of the Scholars is compulsory.

Sunday Schools.	Schools.	Teachers.	Scholars.
Connected with Charity Schools. (Church of England.)			
Having the same teachers, (attendance compulsory).....	22	29	946
Having the same teachers, aided by others, (ditto).....	13(a)	45	664
Having the same teachers (attendance not compulsory) ..	5	5	145
Having the same teachers, aided by others, (ditto).....	1 (b)	4	45
	41	83	1,800
Not connected with Charity Schools.			
Being conducted by paid teachers. Church of England..	11	22	432
Being conducted by gratuitous teachers. Ditto	3	7	87
Ditto ditto Dissenters	14	127	877
Total.....	69	239	3,196

NOTE.—There are no Catholic Sunday Schools in the county.

(a) The additional teachers in seven of these schools are paid, and in six gratuitous.

(b) The additional teachers in this school are gratuitous.

TABLE XI.—Locality and physical condition of the Schools, and the way in which Books are provided.

		Church of England.	Dissenters.	Total.
Out of the Total Number of		55	14	69
Locality	{ in a School-room.....	25	3	28
	{ in a Church or Chapel	6	10(a)	16
	{ in a Kitchen or Sitting-room.....	24	1	25
Physical Condition	{ Cleanliness	{ Clean	7	42
		{ Middling.....	3(b)	3
	{ Ventilation	{ Well.....	10	33
		{ Middling .....	..	9
		{ Ill.....	..	7
	{ Light....	{ Good	10	32
		{ Middling.....	..	15
		{ Bad .....	..	1
Books provided.	{ By congregational collections.....	30	13	43
	{ , private charity.....	15	1	16
	{ , parents	3	..	3
	{ Out of property bequeathed to the poor..	5	..	5
	{ , poor's rates.....	2	..	2

NOTE.—Where the figures do not agree with the total numbers, the information could not be obtained.

(a) In one of these schools the girls are taught in the vestry during the winter.

(b) These three schools were visited on a week-day, and their condition when inspected is here recorded.

GENERAL SUMMARY OF SCHOOLS AND SCHOLARS IN THE COUNTY OF RUTLAND, 1838.

	AGE.			SEX.		TOTAL.		PER-CENTAGE.		
	Under 5 years.	Between 5 and 15 years.	Above 15 years.	Male.	Female.	Schools.	Scholars.	Of the Total estimated Population.	Of the Total Number of Scholars.	Of the Total No. of Sunday Scholars.
Estimated Population, 20,000.										
Sunday Schools—Church of England . . .	229	2,077	13	1,221	1,098	55	2,319	11.60	53.74	79.56
„ Protestant Dissenters . . .	91	780	6	429	448	14	877	4.38	20.32	27.44
Total . . .	320	2,857	19	1,650	1,546	69	3,196	15.98	74.06	100.00
Returned also as Day or Evening Scholars . .	10.01 per ct.	89.39 per ct.	0.60 per ct.	31.63 per ct.	48.57 per ct.					
Receiving Sunday School Tuition only . . .	134	1,775	13				1,922	9.60	44.49	Of the Total No. of Day Scholars.
Day Schools—Dame Schools . . .	186	1,082	6				1,274	6.38	29.57	
„ Common Boys' and Girls' Schools . .	249	429	..	277	401	50	678	3.39	15.71	22.87
„ Superior Private and Boarding Schools .	77	463	..	272	268	35	540	2.70	12.52	18.22
„ Supported solely by the Scholars . .	330	1,017	7	634	720	84	1,354	6.77	31.38	45.68
„ Endowed and Charity Schools, wholly or in part supported by the Public . .	154	1,419	37	941	669	49	1,610	8.05	27.31	54.32
Total . . .	484	2,436	44	1,575	1,389	133	2,964	14.82	68.69	100.00
Evening Schools—Supported solely by the Scholars .	16.33 per ct.	82.18 per ct.	1.49 per ct.	53.14 per ct.	46.86 per ct.					Of the Total No. of Evening Scholars.
„ Connected with Charity Schools . .	..	13	20	24	9	4	33	0.16	0.77	44.00
Total . . .	..	21	21	42	..	3	42	0.21	0.97	56.00
Total Number of Schools and Scholars . . .	670	3,552	91			909	4,313	21.57	100.00	
	15.53 per ct.	82.36 per ct.	2.11 per ct.							

*An Inquiry into the Statistics of Crime in England and Wales.** By
RAWSON W. RAWSON, Esq., F.S.S., Honorary Secretary to the Sta-
tistical Society of London.

[*Read before the Statistical Section of the British Association,*
27th and 28th August, 1839.]

UNDESERVED ridicule has been cast upon some attempts which have been made to show that moral phenomena are subject to established and general laws; for surely there can be no reason for denying that moral, no less than physical, phenomena may be found to be controlled and determined by peculiar laws. Science has taught, and daily experience proves, that the universe is regulated upon a uniform and immutable system; that the several parts coexist and are kept together by means of fixed laws; that nothing is left to its own control, or is liable to derangement or accident; and that what appear to our imperfect senses to be variations, form part of one comprehensive and perfect system.

Mankind is not exempt from these laws. It is not denied that the human body, its organic functions, its formation, growth, and decay, are in every way governed by the same principles which regulate the rest of the animal division of nature. Some of these principles have already been discovered and explained, and their universal existence, though hidden from us, admits not of a doubt. Comparative anatomy has carried our knowledge still further; it has brought to light analogies between the animal and vegetable world which were not so obvious, and therefore were never suspected; it has displayed the uniformity which prevails throughout the whole creation, the secret adaptation of one part to another, the admirable method with which the actions of one member supply the necessities or correct the contrary tendencies of another.

Upon these points there is a general agreement. Neither can it be denied that the mind is subject to such laws; for however high and independent its functions, however great its energy and versatility, there must be a limit to its powers, otherwise man would be able to counteract the order of nature and to disturb the harmony which the Creator has established. But if it be found that even within its allotted space, the passions and tendencies of the mind are the same, subject to the same influences, and exhibiting the same results, modified only by external circumstances; that the same mental and moral phenomena apparently arise from similar causes, and reproduce under all conditions nearly the same effects,—we are justified in supposing that not only is there a limit, but also a law, to the actions of the mind. This is most strongly marked in the infant mind, which, in all climates, and apart

* This inquiry, in its present form, is incomplete. It is the author's intention to pursue his examination further with regard to England and Wales, and to extend it to the other divisions of the United Kingdom. In the mean time the results already obtained, having been brought before the British Association, are published in their present form, with the view of exciting discussion, and of eliciting suggestions and information which may conduce to a thorough elucidation of the subject.

from external influences, exhibits no difference, except with regard to temper, which may be sufficiently accounted for by the varieties in the physical condition of the individual: but as the mind develops itself, it immediately begins to diverge in various directions according to the circumstances in which the individual is placed; such as the healthiness of the parent or nurse, acting upon the body, and so affecting the mind, or her moral education influencing the disposition, and giving direction to its impulses. Some indeed have gone further, and have even asserted that the passions are wholly subject to outward impressions; that if a child were so brought up, that it should never see a person weep except from pleasure, nor smile except in grief or anger, it would adopt weeping as the symbol of joy, and mirth as the token of sorrow, and would express its own feelings in that contrary manner.

But to turn from mere metaphysical speculation to fact, let us take for an example the relative amount of crime committed by males and females. The number of the two sexes in European countries is nearly equal, the preponderance being somewhat on the side of the females. It might be supposed that the natural tendency to crime in the two sexes would be the same, and the number of criminals among each be equal. But it is found that, both in England* and France,† the proportion of male to female criminals is about four to one; and that result varies but slightly during several years. Whence arises this uniformity from year to year, and this similarity between the two countries? There must either be a general law by which the proportions are regulated, or they must be the result of the different circumstances in which the sexes are placed. The first, if it exists, does not appear to be beyond the reach of man's knowledge, because it can be ascertained by repeated observation of the character of crime in various countries; and the latter are obviously capable of being noted, classified, and estimated. In the present state of moral science we can only suppose that the uniformity in the two countries is the result of the constant character of the tendency to commit crime, and that the similarity arises from the two countries being in the same state of civilisation, and the two sexes exposed to similar influences in each.

If it were found that a different proportion existed among the Turks or Hindoos, we should be led to believe that such a result arose from the dissimilarity in the education and social condition of females in those nations. But the very fact, if it exists, would prove the possibility, if not of assigning laws to the actions of the mind, at least of determining their probable results, by estimating the several external circumstances by which they may be influenced. If we had the means of ascertaining correctly the amount and nature of crime in the several countries of the world, and all the circumstances of their social condition, we should be able, by comparison, to ascribe to each circumstance its relative power of inducement to crime, and arrive at the laws which regulate criminality. For if it be found by experience that any particular crime is most commonly perpetrated by persons of a certain sex, or age, or class of life, will it be said that there is a fixed law in their breasts which induces

* See p. 321.

† See *Statistique Comparée de la Criminalité en France, en Belgique, &c.* Par Ed. Ducpétiaux., p. 9.

them to commit that crime because they are of that sex or rank of life, or when they attain that age? or will it not rather be admitted that the act arises from the desire to gratify some passion common to all of the same sex or age, and that the individual adopts the means most suitable and convenient to his actual condition in those respects, and avails himself of the external circumstances by which he is surrounded? These are not abstract qualities, but material or visible objects, which can be both discerned and estimated; and, if so, the tendency to crime, under various conditions, may be determined with a preciseness proportioned to the number, extent, and accuracy of our observations.

It may, however, be urged that there is such a diversity in the action of the mind; it is subject to such various and subtle influences, that we cannot separate and define its impulses, or estimate with correctness its operations. But are these more various than the form and size of animals or plants? Yet the naturalist hesitates not about the classification of either. Are they more diversified than the features of man? Yet who can mistake an European from an Asiatic, or the latter from an inhabitant of Africa? Even the fickle wind and the apparently uncontrollable hurricane are found to be subject to strict laws, and to be as constant as any other physical phenomenon. All these objects of animate and inanimate nature, which are scarcely less fluctuating or apparently less capricious than the mind of man, have been divided and classed, and their ordinary appearances and actions described with accuracy. This knowledge has been acquired by means of long and patient processes, and is the effect of classification and induction, which have hitherto been little used in the examination of the mind and its operations. With the aid of these instruments it will be found that mental and moral phenomena do not present such insuperable obstacles to examination; and although it may be long before we acquire the means of accurately scrutinizing them, or the knowledge of properly applying those means, yet that time advances, and every contribution to moral statistics tends to hasten its approach.

But even if it be impossible for man to attain to this perfect science, yet when, by extensive and repeated observations, the recurrence of certain constant and uniform tendencies has been ascertained and developed, reason may be satisfied with these as the evidence of probabilities, and the legislator will find them far more safe and useful guides than the mere assumptions and *à priori* theories of speculative moral philosophers.

One of the most important branches of moral statistics is that which relates to the commission of crime, and it is one of those which is most easily susceptible of numerical computation. The nature of the act is generally sufficient to indicate the object aimed at; the sex, age, civil and social condition of the offender point out the principal circumstances which influence the method of the act; the degree of instruction which the party has received and the religious knowledge of which he is possessed,—for both of which adequate tests may be prepared,—show the degree of moral restraint to which he is subject, and the intensity of the passion which bursts through that restraint; while the immediate motives, when not inferable from the visible circumstances of the case, will be found upon investigation to be much fewer in number, more

simple in character, and easier of detection and classification, than is generally supposed. A Committee of the Statistical Society of London, which numbered among its members several persons who have devoted much consideration to this subject, found that almost all crimes could be referred to one of four motives, viz., desire of gain, indulgence of sexual desire, malice, and wantonness.*

Of the above particulars the Criminal Returns of this country exhibit only a part, viz., the nature of the act, the sex, age, and degree of instruction of the party committed for trial; and even upon these points there exist in these tables several sources of imperfection. The nature of the act is defined according to the technical phraseology of the law, neglecting the many important distinctions in the character and moral turpitude of the offences. The degree of instruction also is not shown in connexion with the age of the offenders, so that the influence of the former at various ages, and the progress of instruction at intervals of years, cannot be ascertained. Still it would be well if these were the only deficiencies in these Returns. But with regard to the amount, and even the character, of crime in this country, they are still more imperfect, and, if taken by themselves as the index of either, would lead to the gravest error. They exhibit only the persons committed for trial before the Courts of Quarter Sessions and Circuit Assizes or in Local Courts, and do not include those summarily convicted or discharged by magistrates, or by Petty Sessions. It will scarcely be believed that of these last no general record exists: the only information that is complete for the whole of England and Wales, is the number of persons sentenced to imprisonment upon summary convictions, which has been collected and published by the Inspectors of Prisons in their Report for 1838; but this is only for one year; and the number of offenders tried and acquitted, or sentenced to fines or other punishments, has never been ascertained. The average annual number of convictions before the Quarter Sessions, Circuit Assizes, and Local Courts, during the 5 years from 1834 to 1838, was 15,874; the number of persons sentenced by summary conviction to imprisonment, during the year ended Michaelmas 1837, was 59,364.† If therefore the proportion of acquittals to convictions by magistrates be not less than that occurring before the higher courts, and there is every reason to believe that it is greater, the number of cases summarily dealt with by the former would be at least four times as great as the number brought before the higher courts. But the Returns made by the Commissioners of Metropolitan Police enable us to form a more exact idea of the number of summary convictions. In 1837 the number of persons convicted by magistrates within the Metropolitan District for offences, exclusive of drunkenness and other mere infractions of police, ‡ was three times as great as the number committed for trial, § and the number discharged was four times the number of commitments; || so that the number charged was altogether eight times as great as the number brought before the higher courts. But it is pro-

* See vol. i. p. 174.

† Third Report of Inspectors of Prisons. Home District, p. 36.

‡ Viz., disorderly characters, reputed thieves, suspicious characters, and vagrants.

§ Number summarily convicted, 9577; number committed for trial, 3028.

|| Number discharged, 12,781.

bable that the proportion of summary convictions to commitments is higher in the metropolis than in the rural districts, where the obstacles to speedy justice are so numerous that persons will generally forego complaints of small importance rather than be exposed to the inconvenience of prosecution. In London, also, the proportion of persons discharged by the magistrates will be greater than in the rural districts, as the existence and continual presence of an efficient police causes a greater number of persons to be arrested on justifiable suspicion, against whom the legal evidence is insufficient to ensure a conviction. With regard to the character of the offences for which persons are summarily convicted, although it is true that a considerable portion of these are of a trifling nature, yet a large number of serious cases, of the same description and equal gravity with those tried at the Assizes, are adjudicated by magistrates. It is obvious therefore that the Criminal Returns in their present form neither indicate the whole number of persons apprehended or punished for serious offences, nor afford any information whatever with regard to petty offences, which form by far the most numerous class.

In this respect the returns of France and Belgium are complete, as they embrace the courts of correctional and simple police, as well as those of assize. Moreover, they include several criminal offences which are usually tried in England before the civil courts, and which are not taken into the accounts of crime committed in this country; such as adultery, libel, fraudulent bankruptcies, &c.* No adequate estimate of the frequency or tendency of crime in this country can be formed until this information be supplied; and it will become necessary for those who are desirous that the subject should be thoroughly investigated to call loudly upon the proper authorities to lay it before the public.

There are also further difficulties in the way of inquiry into this subject. If the administration of the law remained stationary, the proportion of offences annually determined before the higher and inferior courts would continue relatively the same; but the criminal law of England is at present in a state of transition, and is every year undergoing great changes: local courts and petty sessions are increasing in number; capital punishments are being gradually abolished; large classes of offences are newly brought within the jurisdiction of magistrates; and thus the means of comparison from year to year are wholly destroyed. It must also be borne in mind that the most complete record of the number of criminals arrested does not exhibit the amount of crime committed, as the former depends, in a great measure, upon the disposition of the injured parties or the public to prosecute, and the efficiency of the system of police. There is not in England, as in Scotland and France, a public officer in each county, whose duty it is to ascertain and record every offence which is committed; nor a public prosecutor, who is bound to exert himself to bring all offenders to justice, without reference to the feelings or desires of the persons who have been injured. Hence crime may abound most where arrests are least numerous; and the very freedom from molestation tends to encourage and embolden the criminal.

* The two latter offences are sometimes, but very rarely, tried in the criminal courts.

For these reasons great caution must be observed in examining the criminal returns of the United Kingdom ; and many of the results must be considered only as approximations to the truth, and liable to be invalidated by more comprehensive returns. In their present form, however, they afford the means of certain comparisons, which will serve to throw light upon the moral statistics of the people, and which will now be severally noticed in the most convenient order.

Number of Offences.

The average annual number of persons committed or bailed to take their trial before the quarter sessions, assizes, and local courts, held in England and Wales during the last five years, was 22,174. The difference between the highest and lowest annual numbers during the period was 14 per cent. For the reasons previously stated the annual increase or decrease is no index of the prevalence of crime, but it may be taken as evidence of the operation of the laws. In this point of view there was a considerable decrease in the number of commitments in 1835 and 1836 compared with 1834, amounting, on the average of these two years, to 8 per cent. ; while in 1837 and 1838 there was an average increase of 4 per cent. compared with 1834, and of 12 per cent. compared with the two intermediate years. But it is worthy of remark, that this variation was very different in the two sexes. The decrease during 1835 and 1836 occurred entirely among the male sex ; for the number of female committals was somewhat greater ; and the increase in 1837 and 1838 was more than three times as great among the females as among the males. The average increase of males during the last two years of the quinquennial period compared with the average of the first two was 5·9 per cent., while among the females it was 19·4 per cent.

In consequence of this the relative proportion of female to male offenders has increased 2 per cent. during the five years. In 1834 it was 15·9 to 84·1 per cent., and in 1838 it was 18·1 to 81·9 per cent. The average of the whole period was 17·2 females to 82·8 males.

The variation has also been very different in the several classes of offences. In the present tables the offences are divided into six classes, which have reference exclusively to the acts of parliament under which the offenders are tried. These consist of,—

1. Offences against the person.
2. „ against property, committed with violence.
3. „ against property, committed without violence.
4. Malicious offences against property.
5. Forgery and offences against the currency.
6. Other offences, not included in the above classes.

A slight examination of these divisions will show that the principle upon which they are founded is highly defective ; and this has been ably demonstrated by Mr. Symonds in a paper read before the Statistical Society of London, and published in its Proceedings (p. 193). Another paper upon the same subject, by Mr. H. Romilly of Manchester, appeared in the last miscellaneous publication of the Statistical

Society of that town. That gentleman's views, however, do not accord with those of Mr. Symonds.*

The first defect of the present classification consists in the definition of the offences, which is legal, and consequently technical. The same category, and sometimes the same term, embraces all qualities and degrees of criminality. An assault may mean either a violent attack, by which the life of an individual is seriously endangered, or the mere act of laying a whip on a person's shoulder, without the infliction of a blow. Attempts to injure or murder by stabbing, shooting, and poisoning, are all classed together, although they severally indicate very different offences, both in mode and degree of criminality. But the classification of the offences is still more defective for the purposes of moral investigation. It is based upon no distinct principle; but the effects produced, and the means used, are indiscriminately adopted as characteristics of the offences. The motives which induce the commission of a crime, or the tendencies of which the act is the evidence, are wholly overlooked. Mr. Symonds has suggested a new principle of classification, which we have adopted, and which we shall have occasion presently to explain. For our present object of showing the relative increase of different kinds of offences, during the five years in question, the classes used in the official tables will be sufficient.

It appears, then, that the number of offenders against the person committed for trial has gradually decreased to the extent of 19 per cent. on the average of the last two compared with that of the first two years of the period. Malicious offences against property, compared in the same manner, have decreased 36 per cent., while offences against property, with violence, have increased 7 per cent.; and offences against property, without violence, together with forgery, and offences against the currency, have each increased 19 per cent. The latter two classes are those in which the proportion of female offenders is greatest; and the former of the two includes more than three-fourths of the whole number of offences, which is the cause of the proportionately greater increase already noticed in the number of female committals. But this comparison must not be used as testimony with regard to the general increase or decrease of particular classes of crime, for it is precisely that upon which the recent changes in the criminal law has had most influence. Many grave offences have lately been brought within the

* Mr. Romilly divides offences into two great classes, viz.—

1st. Offences against private, or assignable, persons.

2nd. „ „ the community or public.

The first division contains four classes—

1st. Offences against the person.

2nd. „ „ the property.

3rd. „ „ the reputation, as libel, &c.

4th. „ „ the condition, as bigamy, child-stealing, &c.

The second division contains six classes—

1st. Offences against the safety and comfort of the public, as nuisances, &c.

2nd. „ „ public morals, as drunkenness, gambling, &c.

3rd. „ „ religion, as blasphemy, irreligious publications, &c.

4th. „ „ the course of justice, as obstructing public constables, perjury, &c.

5th. „ „ Government, as high treason, political libels, &c.

6th. „ „ the public revenue or wealth, as smuggling, destroying machinery, &c.

jurisdiction of magistrates, and the establishment or re-modelling of local courts and petty sessions has afforded increased facilities for the speedy trial of less serious cases, which magistrates were formerly unwilling to send to the assizes or quarter sessions.

Classification of Offences.

The first great division of the subject which deserves our notice is the nature of the offences committed. The classification adopted in the official tables has been already described, and its chief defects explained. Mr. Symonds, in his amended outline, has classed the offences comprised in those tables according to the motives from which they may be supposed to spring, and reduces them to four heads, under which all conceivable crimes may be comprehended.

1. Stealing, which he subdivides into three heads :—

(a) Simple, without force.

(b) By fraud.

(c) By force.

2. Sexual offences, or offences arising from sexual desire.

3. Malicious offences.

4. Offences against the state, including,—

(a) Stealing, as in other cases.

(b) Evasion of the state authority.

(c) Breaches of the peace, and defiance of the state authority.

This classification has been adopted in the following inquiry, with some modifications of slight importance. Mr. Symonds makes stealing the first of his divisions, because it is the most frequent crime, and prevails at all ages and under all conditions. A different order has been adopted in the tables upon which the following results are based. Sexual offences have been placed first, because they arise from a more simple motive than any other class of crime. They spring from a desire to gratify a mere animal passion, without direct reference to any other person or object; for if that passion could be gratified without injury or annoyance to another person, the desire of the criminal would be equally attained. Such at least is the character of the two principal offences in this class, viz., criminal assaults upon females and unnatural crimes. Others are included in which the distinction is not so strongly marked, but which are much less numerous, and which chiefly spring from the indulgence of sexual desire, viz., attempts to procure the miscarriage of women, and concealing the birth of infants; while in some it remains doubtful whether the object is lust or the desire of gain, as abduction and bigamy, and in one, the keeping of disorderly houses, the object is decidedly the desire of gain by administering to the sexual passions of others. Malicious offences, which include those arising from wantonness, are placed next, because the aim of the offender is to gratify some passion, as, for instance, revenge, or the love of mischief, by doing injury to some person or thing. In this class the desire of the offender has reference rather to an object than to an action, and cannot be gratified without the infliction of evil upon some other object. In theft, which forms the third class, the offence arises from a desire to obtain possession of an object by which some passion may be gratified. In the two preceding classes the act constitutes the desired end, but in

this the act affords only the means to that end. These distinctions may appear to be too finely drawn; but if they are correct in principle, they cannot be unprofitable in investigating one of the most subtle objects, the nature of crime. The fourth class is the same as in Mr. Symonds' outline, and includes offences against the State, such as—

Stealing; by fraud, as coining;

„ by force, as smuggling and resisting officers with violence.

Defiance or evasion of the state authority;

by fraud, as perjury;

by force, as riot and resisting peace officers.

To this it has been necessary to add a fifth class, which contains a small number of offences not specified in the official tables,* and which under the proposed system of classification, would be divided among the other four heads. Each of these will be examined separately, and a more minute description will be given of the offences which they include.

In order to afford a fair average for statistical deductions, the Returns for England and Wales, of as many years as the official tables have been prepared with uniformity upon the present system, have been thrown together. In most of the particulars this has been done for five years; but, with respect to the degree of instruction, the necessary information has only been obtained during four years, and some difference in the headings during the first year of that period renders it impossible to amalgamate the return with those for the subsequent years. The remaining number, however, is fully sufficient to form a fair average for the purposes of the present inquiry.

The total number of offenders annually committed for trial on the average of the whole period was 22,174. Of these only a small portion, amounting to 537, or 2·4 per cent., were sexual offences belonging to the first class. All the crimes contained in this class, with one exception, have been already enumerated.

The second class, consisting of malicious offences, is divided into acts against property, and acts against the person. The former subdivision is identical with the fourth class, having the same title, in the official tables. The chief offences included in it are arson and wilful fire-raising, injuries to cattle, and destruction of buildings, machinery, trees, and other articles. The number of offenders in this class was very small, not exceeding 138, or less than 1 per cent. (0·62) of the total number. The average annual number in the second subdivision, which consists of assaults, attempts to maim and murder, manslaughter and murder, was 1174, or somewhat more than 5 per cent. (5·3). This class exhibits a striking instance of the defectiveness of the official tables, in not separating attempts to maim from attempts at murder, the objects and qualities of which offences are wholly different.

If universality gave a right of priority in the classification of crimes, as contended by Mr. Symonds, Theft ought indeed to be placed at the head of the table. It forms $\frac{1}{4}$ ths (84·5 per cent.) of the whole number of offences. This class contains three subdivisions. The first includes all kinds of theft without violence, such as simple larceny, stealing from houses or from the person, thefts and embezzlements by

* “Felonies,” and “misdemeanors not included in the preceding denominations.”

servants, stealing of animals of all descriptions, and receiving stolen goods, and is by far the most numerous, having contributed 16,663 cases, or exactly $\frac{3}{4}$ ths (75·14 per cent.) of the whole number of offences. The second subdivision, which consists of thefts by fraud, viz., simple frauds, forgery of deeds and other instruments, with the exception of bank notes, and conspiracy to raise the rate of wages, contained 497 cases, or $2\frac{1}{4}$ per cent. (2·24) of the whole number. The remaining subdivision contains thefts by force, of which the chief are burglary and housebreaking, robbery and poaching. The total number of offenders in this section was 1579, and the proportion to the total was 7 per cent. (7·12), of which burglars and housebreakers constituted two-thirds (4·54 per cent.).

The fourth class, composed of offences against the State, furnished 1500 cases, amounting to $6\frac{3}{4}$ per cent. (6·77) of the whole number. This class includes coining and forgery of bank notes, of which there were 355 cases, or $1\frac{1}{2}$ per cent., a few cases of aiding smugglers, riots and breaches of the peace, resisting, assaulting, or refusing to aid peace-officers, prison-breaking and returning from transportation, perjury, and administering unlawful oaths. The remaining class contains only 86 offences, or less than $\frac{1}{2}$ per cent. (0·39) of the whole number. To recapitulate—the proportion of thefts was 84·5 per cent.; of offences against the State, 6·77 per cent.; of malicious offences, 5·92 per cent.; of sexual offences, 2·42 per cent.; and of unenumerated offences, 0·39.

Taking the 20 principal offences in their relative order, according to the number of persons annually committed for each, they will stand thus:—

1 Simple larceny	12,303
2 Stealing from the person	1,539
3 Housebreaking and burglary (united)	1,007
4 Stealing by servants	955
5 Assaults	756
6 Receiving stolen goods	683
7 Riot and breach of the peace	607
8 Resisting, assaulting, or refusing to aid peace-officers	579
9 Frauds and attempts to defraud	425
10 Robbery and attempts at robbery	392
11 Uttering counterfeit coin	318
12 Sheep-stealing	292
13 Embezzlement	262
14 Manslaughter	209
15 Rape, and attempts to ravish	188
16 Stealing from houses to the value of £5.	178
17 Stealing of fixtures, trees, and shrubs	163
18 Horse-stealing	155
19 Poaching	153
20 Keeping disorderly houses	145

Influence of Sex.

Great differences, however, are manifested in the proportions of the two sexes taken separately. In the class of sexual offences the percentage proportion of females is twice as great as that of males, being 3·6 to 2·1 per cent. In malicious offences against property it is only one half, 0·32 to 0·68, and in similar offences against the person about $\frac{3}{4}$ ths of the proportion among males (3·5 to 5·6 per cent.). In thefts without violence, it is $\frac{1}{6}$ th the greater (84 to 73 per cent.), in thefts by

fraud $\frac{1}{3}$ th the less (1·9 to 2·3 per cent.), and in thefts by force it is more than $\frac{2}{3}$ ths less (1·9 to 8·2 per cent.). In coining, the proportion of females is double that of the males (2·6 to 1·3 per cent.), and in the remaining offences against the State, it is $\frac{3}{7}$ ths less (4·1 to 7·3 per cent.).

By means of these differences may be traced the various tendencies to criminality among the two sexes. There are several offences enumerated in the tables for which no female has been committed, viz., abduction, destruction of hop-binds, trees, and shrubs, cattle-stealing, conspiracy to raise the rate of wages, robbery in dwelling-houses accompanied with violence, poaching game and fish, deer-stealing, aiding smugglers, and administering unlawful oaths; and there are several others in which the proportion of females is very small. In most of these, particularly those enumerated, the nature of the offences is such that females have no inducement, or from physical weakness have no capacity, to commit them. It might be supposed that there were also some offences wholly peculiar to the female sex; but this is not the case, for even in the offence of which the largest relative proportion of females are guilty, viz., concealment of the birth of infants, males share to the extent of 5 per cent. It is worthy of remark, and may be interesting in a legal point of view, that during the five years there were two committals of females for rape, and one for an unnatural crime.* The tables do not afford the means of ascertaining whether they were put upon their trial, or the charge was previously abandoned.†

The relative proportion of females to males in the several classes of crime above described is as follows. It is greatest in offences against the currency, and amounts to 28·5 per cent.:—

	Per Cent.
In sexual offences it amounts to . . .	25·7
,, thefts without force . . .	19·3
,, ditto by fraud . . .	14·6
,, malicious offences against the person . . .	11·6
,, ditto property . . .	9·
,, offences against the state . . .	4·9
,, thefts by force . . .	4·5

From this it will be seen that the offences which are most common among females are generally those in which force is not required: but upon examining the offences separately, omitting those in which the numbers are too small to admit of a fair comparison, it will be found that there is one remarkable exception, which is the crime of murder. This is the only violent offence which exceeds the average, and the excess amounts to 58 per cent. This fact may be accounted for upon the supposition that cases of infanticide are included under the head of murder; which is probable, as that crime is not separately distinguished in the tables, and because the proportion of cases of murder to those of attempts to maim or murder, is as 4 to 3 among females, while among males the rate is reversed, and is as 2 to 5. This can only be explained by the circumstance of infanticide forming a considerable portion of the

* In France also, during the year 1836, two females were put upon their trial for rape.

† It was stated in the Section by a gentleman who was present at the trial of one of these females for aiding a rape, that she was convicted and sentenced to transportation.

murders committed by females : for it is obvious that attempts at infanticide can rarely fail ; while, on the other hand, it is almost certain that, in attempts at murder, men are more likely to fulfil their purpose on account of their superior strength. A reference to the French tables confirms this view : for, in the year 1836, while the proportion of murders by females was 37 per cent., including infanticide, it was only 15 per cent. exclusive of that crime, which proportion was 3 per cent. less than the average aggregate proportion of females ; and further, whereas the attempts at murder, exclusive of infanticide, were about half as many as the number of murders, there were only two incomplete attempts among 15·3 cases of infanticide. This instance affords another proof of the imperfect classification of the English tables, and of the caution with which they must be examined.

Of other crimes there is only one which is almost peculiar to females, viz., concealment of the birth of infants, and in this the excess arises from an obvious physical cause, the sex. There are only two other offences in which the females predominate, viz., child-stealing, in which the proportion is 70 per cent., and keeping disorderly houses, in which it amounts to 57·3 per cent. The remaining offences exhibit a very great decrease in the proportion : they rank according to their relative frequency as follows :—

	Per Cent.
Receiving stolen goods	33·6
Thefts from the person	29·4
Uttering counterfeit coin	29·3
Thefts by servants	28·3
Murder	27·3
Counterfeiting coin	26·
Stealing in dwelling-houses to the value of £5.	22·7
Bigamy	21·4
Indecently exposing the person	19·8
Prison-breaking and returning from transportation	19·4
Average of all offences	<u>17·2</u>

Of offences in which the proportion is below the average, it is only necessary to name the chief.—

	Per Cent.
Arson	16·5
Frauds	16·1
Assaults	12·4
Attempts to maim and murder	8·4
Robbery and attempts at robbery	6·5
Riot and breach of the peace	5·3
Manslaughter	5·2
Burglary and housebreaking	4·7

Influence of Age.

The next point for consideration is the ages of the offenders, which are divided into eight periods in the official tables. No greater proof can be given of the possibility of arriving at certain constants with regard to crime, than the fact which appears in the following table, that the greatest variation which has taken place during the last three years, in the proportion of any class of criminals at the same period of life, has not exceeded $\frac{1}{2}$ per cent. :—

Table I. Centesimal proportion of offenders at each age.

	1836.	1837.	1838.	Greatest difference.
Under 12 years	1.84	1.52	1.58	0.32
From 12 to 16	9.71	9.72	9.92	0.21
" 17 " 21	29.03	29.23	29.13	0.20
" 22 " 30	31.42	31.74	31.24	0.50
" 31 " 40	14.43	14.56	14.75	0.32
" 41 " 50	6.76	6.65	7.02	0.37
" 51 " 60	3.33	3.24	3.00	0.33
Above 60	1.40	1.55	1.58	0.18
Not ascertained	2.08	1.79	1.78	0.30
Total	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	

It may therefore be assumed that the following averages, which are taken upon a period of five years, are correct. There are two modes of considering the prevalence of crime at different ages. The first, which is usually adopted because it is the least troublesome, is to compare the number of offenders at each age with the total number; but this only serves to show the relative frequency with reference to offenders at other periods of life, and not the positive frequency of crime among the population at each age. Thus the relative proportion of male offenders between 21 and 30 is 32.4 per cent. of the whole number, and that of males between 16 and 21 is only 2 per cent. less (30 per cent.), but the former period embraces nine years and the latter only five; and the number of males living in the same periods respectively is as 14 to 9.* The frequency therefore of crime is more than one-half greater (56 per cent.) among persons between 16 and 21, than among those between 21 and 30. The second method is by comparing the number of offenders at each age with the population at the same age; and this comparison would not admit of error, if the periods of years in the two Returns were similar; but this unfortunately is not the case in the present instance. The data, however, admit of some comparisons, which although not exact, are sufficiently near for the purpose, and offer some highly interesting results.

Of the whole number of offenders of both sexes,—

11.7 per cent. were under 17	
30.0 " " from 17 to 21	
32.2 " " " 22 " 30	
14.6 " " " 31 " 40	
6.9 " " " 41 " 50	
3.2 " " " 51 " 60	
1.4 " " above 60	
<u>100.0</u>	

The proportions of the total population, at periods very nearly corresponding, show that there is no relation whatever between the number of individuals and that of offenders at the same ages, and will prove how great is the influence which age exerts upon the tendency to crime.

* The period in the Criminal Tables is from 17 to 21, and in the Population Returns from 16 to 20; but as they each embrace the same number of years, at a period of life when the numbers at each year are most uniform, the comparison may be drawn without risk of any great error.

Per-centage proportion of the population of both sexes.				
Under 16	.	.	.	33.1 per Cent.*
From 16 to 20	.	.	.	10. „
„ 21 „ 30	.	.	.	15.8 „
„ 31 „ 40	.	.	.	11.9 „
„ 41 „ 50	.	.	.	9.4 „
„ 51 „ 60	.	.	.	6.6 „
Above 60	.	.	.	7.2 „
				<hr/> 100.0 <hr/>

Hence the proportion of offenders under 17, after making allowance for the difference of one year in the two standards of comparison, is about $3\frac{1}{2}$ times less than that of the population; between 17 and 21 it is 3 times as great; between 22 and 30 it is twice as great; between 31 and 40 it is $\frac{1}{2}$ th greater; between 41 and 50 it is $\frac{1}{4}$ th less; between 51 and 60 it amounts to only $\frac{1}{2}$, and above 60 it is 5 times less. Thus crime is shown to reach its maximum between 16 and 21, during which period its relative proportion is $\frac{1}{3}$ rd greater than that of the population; it diminishes $\frac{1}{3}$ rd from 21 to 30, and a further fifth between 31 and 40, after which the proportion begins to change, and becomes less than that of the population, diminishing rapidly until in old age, or above 60, it is considerably less than in youth under 15.

This comparison may be shown in another manner. The average population of England and Wales, during the five years under examination, may be assumed to be 15,026,447. This number is obtained in the following manner. The mean of the five years is 1836, which is also the mean of the decennial period from 1831 to 1841. The population of that year may therefore be found by adding to that of 1831, at a rate equal to half the increase during the previous decennial period. Adopting this total, and the proportions above given, the numbers existing at each period of life will be as follow:—

Under 16	.	.	.	5,875,340
From 16 to 20	.	.	.	1,502,644
„ 21 „ 30	.	.	.	2,374,178
„ 31 „ 40	.	.	.	1,788,147
„ 41 „ 50	.	.	.	1,412,486
„ 51 „ 60	.	.	.	991,745
Above 60	.	.	.	1,081,907
Total	.	.	.	<hr/> 15,026,447 <hr/>

The following, therefore, is the proportion of offenders annually committed to the population at each interval of age, adding to the number under 16 one-fifth of the number between 16 and 20, and taking away, from that between 21 and 30, one-tenth, in order to equalise the periods of comparison:—

No. of Offences annually committed on the average of the five years.			Proportion of Offences to the Population.	
Under 17	.	2,539	one offence in 2,432 individuals.	
From 17 to 21	.	6,468	„	232 „
„ 22 „ 30	.	6,997	„	305 „
„ 31 „ 40	.	3,184	„	561 „
„ 41 „ 50	.	1,501	„	941 „
„ 51 „ 60	.	703	„	1,410 „
Above 60	.	319	„	3,391 „

* Calculated upon the Population Returns of 1821, which was the last census in which the ages were taken.

This table, it must be borne in mind, does not serve to show the positive frequency of crime, but merely its relative frequency at different ages; because it may be presumed that the ages of offenders not arrested or summarily convicted, do not materially differ from those of offenders committed for trial. There is, also, a circumstance which will in some degree disturb the above proportions. The number of persons employed abroad in the army and at sea will considerably diminish the proportion remaining at home, and liable to the commission of crime, between 18 and 35; therefore the tendency to crime between those ages will be even higher than that above shown, and a corresponding influence will be exerted upon the other periods of life.

These proportions are very different from those shown by M. Guerry to exist in France during the 6 years from 1825 to 1830.* In his statements the males and females are shown separately, and cannot be thrown together; but, as the difference in the proportions of the two sexes is not great, and as, in England, it is found that the number of male offenders is so much greater than that of females, that the proportions of the sexes united differs very slightly—never more than $\frac{1}{2}$ per cent. from those of the males alone—the proportions for males will serve as a standard.

			France.	England and Wales.
Under 12				
From 12	to 16 exclusive		1.9	{ 1.7
„ „	„ „ inclusive		..	{ —
„ 16	„ 21†		16.9	10.
„ 21	„ 30		34.4	30.
„ 30	„ 40		23.5	32.2
„ 40	„ 50		13.5	14.6
„ 50	„ 60		6.3	6.9
Above 60			3.5	3.2
				1.4

Thus, unless the system of police is wholly different in France, and juvenile offenders are not brought before the courts of assize, there is a most startling difference in the early development of crime in the two countries. But the above supposition will not account for the difference, because the latter is not confined solely to juvenile offenders, but prevails to the end of the scale. In England the proportion under 17 is 6 times as great, and even under 12 is nearly as great as under 16 in France. There is a difference of one year in the scale which cannot be adjusted. From 17 to 21 it is nearly twice as great in England as it is in France during the same number of years, from 16 to 20. Between 20 and 30, it is nearly equal in both countries. Beyond that age the excess is on the side of France; from 30 to 40 the proportion is $\frac{1}{2}$ greater, from 40 to 60 it is double, and above that age it is $2\frac{1}{2}$ times as great.

Combined influence of Sex and Age.

In both countries crime develops itself at an earlier age among males; and, on the other hand, prevails to a greater extent among females at the more advanced periods of life. This is particularly the case in England. But in neither respect is the real excess so great as would

* Essai sur la Statistique Morale de la France. Planche, 7.

† In the French scale, the first year of each period is included; in the English it is excluded, being united to the previous period.

appear from a mere inspection of the tables, because there is a considerable excess of males existing in the population under the age of 15, amounting to nearly 3 per cent., and a more than corresponding excess in the number of females at other periods. Another defect in the comparison usually drawn is, that a real difference at one period of life will cause an apparent difference, by disturbing the relative proportions at another. We shall remedy this defect by showing the proportion of the two sexes to one another at each age; but, for the sake of comparing the two countries, we shall first give the per-centage proportion of each sex taken separately.

FRANCE.						ENGLAND					
			Males.		Females.			Males.		Females.	
Under 16	..	..	.	1.9	1.4	Under 12	..	..	.	1.8	1.4
From 16	to	20	.	16.9	13.5	From 12	to	16	.	10.3	8.6
„ 21	„	30	.	34.4	31.3	„ 17	„	21	.	30.4	26.7
„ 31	„	40	.	23.5	26.5	„ 22	„	30	.	32.4	31.6
„ 41	„	50	.	13.5	15.0	„ 31	„	40	.	14.3	16.6
„ 51	„	60	.	6.3	6.0	„ 41	„	50	.	6.4	9.0
Above 60	..	..	.	3.5	3.3	„ 51	„	60	.	3.0	4.3
						Above 60	..	..	.	1.4	1.8
Total			.	100.0	100.0	Total			.	100.0	100.0

In England the excess in the proportion of males, under 12 years of age, is 28 per cent., and in the subsequent periods, 20, 14, and 2 per cent. until the age of 40, when the excess turns upon the side of the females, and amounts at the several consecutive periods, to 16, 42, 43, and 28 per cent. respectively.

Comparing, however, the two sexes with each other, it is found that while the average relation is 82.8 males to 17.2 females, it is 2.7 per cent. greater among males under 12; 2.3 per cent. greater between 12 and 16, and 1.7 per cent. greater between 17 and 21. Between 22 and 30 it is within a small fraction of the average, but between 31 and 40 it is 2.4 per cent. in excess on the side of the females, and from 41 to 60, 5.9 per cent. Above 60 the excess diminishes to 2.9 per cent.

				Difference of the proportion of Males compared with the average.	
		Males.	Females.	Excess.	Deficiency.
Under 12	..	85.5	14.5	2.7	..
From 12	to 16	85.1	14.9	2.3	..
„ 17	„ 21	84.5	15.5	1.7	..
„ 22	„ 30	83.0	17.0	.2	..
„ 31	„ 40	80.4	19.6	..	2.4
„ 41	„ 50	76.9	23.1	..	5.9
„ 51	„ 60	77.0	23.0	..	5.8
Above 60	..	79.9	20.1	..	2.9
Average		82.8	17.2		

Influence of Age upon the nature of the Offences.

There are also great differences in the nature of the offences committed at various periods of life, as will be seen in the next abridged table. The crime which is most frequent at an early age, is simple

larceny. The proportion which persons under 12 years of age, committed for this offence, bears to the whole number, is 2·3 per cent., and the actual number is so great, that it leaves a very small number of offenders of this age guilty of other crimes. Among the most prominent of these, however, are stealing from the person by servants, and house-breaking. In the latter case, it is obvious that the offenders are the tools of older parties, and are employed on account of their small size and slenderness, for the purpose of obtaining an easier access to the intended objects of depredation. Among offenders between 12 and 16, the same offences still hold the predominance, but the proportion of housebreakers is increased. Malicious offences and frauds also become more frequent.

In the remaining periods of life we must confine ourselves to a few principal classes, otherwise the inquiry would run too much into detail for the present occasion. The two periods from 17 to 21, and from 22 to 30, are the most interesting, from the great difference in the character of the crimes peculiar to each. In the former, acts of theft accompanied with violence, greatly predominate; indicating, thus, the influence of physical strength, combined with passion unrestrained by experience or acquired prudence. Robbery and housebreaking each amount to 41 per cent. of their respective total numbers. But there is a marked difference in the two crimes. Almost all robberies, viz. 86·4 per cent. are committed by persons between the ages of 17 and 30, but a considerable proportion of acts of housebreaking are committed at other ages. Hence, although the proportions are alike between 17 and 21, there is 11 per cent. less in housebreaking between 22 and 30. In larcenies without violence, the proportion is almost the same at both periods, being 30·5 per cent. at the earlier, and 30·3 at the more advanced age. In the remaining classes of crime the excess is considerably on the side of the latter period, and particularly in sexual offences, and malicious offences against the person, the proportion of both of which is much below the average at the earlier period.

Between 31 and 40 there is no class of crime in which the proportion exceeds two-thirds of the proportion between 22 and 30, and there are only three classes in which it surpasses the proportion between 17 and 21, although the number of years is double. These three are sexual offences, frauds, and malicious offences against the person, and the percentage proportion is in each within a fraction of 22 per cent. Between 41 and 50 the same offences, together with malicious offences against property, maintain the same preponderance, the highest being sexual offences, the proportion of which exceeds larcenies without violence by more than one-half, and is from 4 to 6 times as great as housebreaking or robbery. From 51 to 60 the sexual offences continue to keep the same rank, and beyond 60 their proportion is nearly double that of any other offence, except coining, which is the next most prevalent class at this age, the difference being 37 per cent. Fraud and malicious offences against property also maintain a high place.

Centesimal Proportion of Offenders (of both Sexes united) at various Periods of Age, distinguishing several Classes of Offences.

AGES.	NATURE OF OFFENCES.								
	Sexual.	Malicious		Simple Thefts.	Thefts by Fraud.	Housebreaking.	Robbery.	Coining.	Other Offences against the State.
		Against Property.	Against the Person.						
Under 12 . .	..	1.6	0.4	2.1	1.0	1.2	0.3	0.5	0.2
From 12 to 16 . .	3.4	8.2	3.0	11.7	6.1	9.3	3.0	3.9	2.1
17 21 . .	18.0	23.6	18.9	30.5	19.9	41.1	41.6	29.1	26.3
22 30 . .	32.8	35.6	39.1	30.3	32.1	33.8	44.8	37.8	44.5
31 40 . .	22.4	13.9	22.0	14.0	22.2	10.0	7.6	15.9	16.8
41 50 . .	12.8	10.6	10.6	6.8	11.5	2.9	2.0	6.8	5.9
51 60 . .	6.9	4.3	4.3	3.2	5.12	1.2	0.5	3.3	3.0
Above 60 . .	3.7	2.2	1.7	1.4	2.0	0.5	0.2	2.7	1.2
Total . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In comparing the two sexes separately, the most remarkable features are the excess of males charged with sexual offences at an advanced age; of females charged with malicious offences against the person between 40 and 50; and of females charged with larcenies without violence beyond 30. Larceny from the person is most prevalent among males under 21, and among females above that age. On the other hand, larceny by female servants is more frequent at an early age than among males; and, in connexion with this fact it is worthy of note, that the number of male servants charged with larceny is nearly three times as great as that of female servants, whereas there is reason to suppose that the number of female servants considerably exceeds that of the other sex. This part of the subject admits of further investigation, which will doubtless elicit some curious and instructive results.

The remaining feature of crime exhibited in the official tables is the degree of instruction which the offenders have received. But this is a subject of so much importance, and possesses so much intrinsic interest, that it appears expedient to reserve it for a separate article.

Some persons may perhaps inquire the practical utility of this investigation—how a knowledge of the above facts will conduce to the main object connected with this subject, the repression of crime. Our reply is, that a standard of comparison having been once obtained, we can ascertain how each locality in which we are individually interested differs from the average; and, by examining the nature of the offences committed and the condition of the offenders, we may elicit the local causes which create an excess. If crime in the county of Warwick be found to be more frequent than in any other county except Middlesex and Gloucester*—if burglary and housebreaking appear to be more common in the counties surrounding the metropolis than even in the metropolis itself†—if early depravity, connected with more than ordinary ignorance on the part of the offenders, display itself in some districts more than in others—we obtain a knowledge of facts which are of immediate interest and importance to those localities, and which, while

* See p. 338.

† Pp. 340-1.

they indicate the existence of certain pressing evils, and the necessity for attempting their removal, will usually point out the measures by which that can be most readily and speedily effected.

SECTION 2.—COMPARATIVE VIEW OF CRIME IN VARIOUS DISTRICTS.

In the preceding pages an attempt has been made to exhibit the character of crime in the whole of England and Wales, without reference to the peculiarities of any district or any class of the population. As the tables present the returns for each county separately, this may be done to some extent, but subject always to this imperfection, that each county contains districts in which very different classes of population exist, such as urban, rural, manufacturing, &c., which cannot be separated; and that, in all, the proportions of these classes differ, so that the comparison can only be approximate. In determining the districts into which the several counties of England and Wales should be classed, for the purposes of comparison, some consideration was necessary. The division might have been local, distinguishing them in sections according to their geographical position, as M. Guerry has done in his work on the Moral Statistics of France, and as we understand he has also done in an inquiry, which he has completed, into the Criminal Statistics of England: but this would not have afforded any useful comparison. Within the small space of this island, among a people who, with the exception of the Welsh, whatever may have been their original country, have long since been united as one family—among whom civilisation is nearly equally spread,—and who are subject to little or no variety of climate—it is not probable that a mere local or territorial division would exert any influence with regard to the commission of crime. We know, or rather we believe, for we have never possessed the data to form a correct comparison, that the character of crime in the South of Europe is different from that which exhibits itself in more northerly countries: this we attribute to the action of climate upon the temper and habits of individuals; but no such difference exists in England. We observe a marked distinction between the national characters of the French and the German people, of the English and Irish; and this we attribute to a difference in their origin—to their having sprung from different races, and having continued up to the present time unmixed with the surrounding nations; but no such distinctions can be traced in England. Excepting in Wales, scarcely a feature of the several races from which our present population has sprung remains distinct: Briton, Roman, Saxon, Dane, and Norman are all blended together, and their national character is totally lost, except perhaps in some sequestered spot, in which partial traces of the primitive character and language of the first settlers may still be found. Such is a valley near Kentmere in Westmoreland, where, it is stated, that the original language of the Danish inhabitants is retained in so high a degree of purity, that a native of Denmark at the present time is able to hold a ready conversation with the peasantry in his own language.* But this

* A friend of the author, happening to travel through this valley a few years ago with a Danish servant, found this to be the case.

is a remarkable exception; and it does not appear that any advantage whatever would be derived from a comparison of territorial divisions. A more philosophical division, and one which is more likely to yield useful results, is that which is founded upon the character of the population. Experience teaches us that the employments of the people exert the most important influence upon their physical condition; and it appears reasonable to believe that their operation is also very powerful upon their social and moral character. Crime is one of the strongest evidences of such an influence: if, therefore, we can trace its action among different classes of the community, we shall acquire one instrument for estimating the amount and tendency of that power, and shall probably throw a light upon the subject which will lead to other and still more important discoveries.

The several divisions which it would be desirable to make appear to be those of town and rural, agricultural and manufacturing, mining and maritime classes. These might admit of some subdivisions. The towns might be divided into metropolitan sea-ports, and places of fashionable resort. The agricultural section presents two distinct features, pasture and tillage; and manufactures might be classed according to the material used, as vegetable products or metals, &c.; or according to the process, as by weaving or smelting; or the mode in which they are conducted, as in factories or in the dwellings of the labourers: but we must be content with such divisions as the classification of the tables in counties admit, and these are confined to four, viz., agricultural, manufacturing, mining, and metropolitan. The former two have each been subdivided into two districts, with the view of examining whether any material local differences exist. The distinctive character of each county has been ascertained by means of the Population Returns in 1831, in which the number of persons employed in agriculture, manufactures, and trade, are separately stated. In some counties a more particular knowledge of the population was requisite, and in a few it was very difficult to assign a preponderance; but it is believed that the classification is in general sufficiently correct.

The first subdivision of the agricultural class includes all the counties in the east of England, south of the Wash, except Middlesex, Essex, and Kent. As Lincoln is the only agricultural county north of this line, and immediately adjoins the district, it might have been included, but its exclusion does not involve an error. The second subdivision includes the six southern counties of Devon, Somerset, Dorset, Wilts, Hants, and Sussex. There remain four other agricultural counties, besides Lincoln, whose situation prevented their combination with the others, and which did not form a class by themselves, viz., Hereford, Shropshire, Cumberland, and Westmoreland. The latter two are so distinct in character from the rest, that they might be placed in a separate division.*

The northern division of manufacturing counties includes Lancashire, Cheshire, Stafford, Derby, Nottingham, and Leicester. In all of these, except Stafford, weaving and the several processes to which its materials

* Another division of the agricultural counties has since suggested itself to the author, and will probably be the subject of a future comparison, viz., maritime and inland counties.

are subject, form the chief employment; but in some mining is pursued to a considerable extent. This is particularly the case in Staffordshire, in which county also the manufactures consist chiefly of pottery and hardware. Although Leicestershire is a great grazing county, the population, not only of the towns but of the villages also, are chiefly employed in manufactures, which they carry on at their own dwellings. The second division of this class contains the four counties of Warwick, Worcester, Monmouth, and Gloucester. Weaving to any extent is only carried on in the last.

The extent of Yorkshire is so great, and the occupations of the inhabitants of the West Riding are so different from those of the other two, in which, however, the preponderance of numbers exist, that as the Ridings could not be shown separately, it was necessary to keep the county distinct from either the manufacturing or agricultural class. By this means, however, an easy standard of comparison for Wales is afforded, as the population of the county is exactly double that of the principality.

There are four mining counties, viz., Cornwall, Glamorgan, Durham, and Northumberland. The rest of Wales is shown separately—the number of offenders being so small and the condition of the population so similar, that it was not expedient to distinguish the counties; while the distinctive character of the people, sprung from a different race, speaking a different language, and isolated by situation from the rest of England, together with the mountainous nature of the country, affords sufficient reasons for keeping it separate from the agricultural division, to which, with the exception of the counties of Glamorgan, Denbigh, and Anglesea, it would properly belong.

The remaining division is the Metropolitan, including, besides Middlesex, the three counties which immediately adjoin the metropolis. So large a portion of the suburbs of London is situated in Surrey, that it is necessarily placed in this division. It was considered that the same reason would apply to Kent and Essex, particularly to the former, in which Greenwich and Deptford are situated: and in some respects this opinion is found to be justified; but in others the difference between these two counties and Middlesex is so great, that, for the purpose of some comparisons, they cannot be included with the latter.

The same particulars which have been exhibited, with respect to the whole of England and Wales, have been prepared for each county separately, and for each of the districts above described. We may thus trace out the differences observable in the nature of the crimes, the sex, age, and degree of instruction in each part of England, and among each class of the population; and although it must necessarily be done very briefly on the present occasion, the materials are prepared for a more minute and rigid investigation, to which at an early period they will be subjected.

Of course, no comparison could be established between the several districts until the population of each was determined. This was therefore done in the manner previously explained, by calculating the increase since 1831, in each county separately, according to the rate of increase which occurred in each between 1821 and 1831. The total population thus estimated, amounted in 1836 to 15,026,447. The

agricultural district contained 4,785,298, or 31·8 per cent. of the whole. The eastern section of this district contained 1,866,700 inhabitants, and the southern 2,000,798, amounting to 12·4 and 13·3 per cent. respectively. The whole of the manufacturing district contained 4,182,867, or 27·8 per cent.; the northern section containing 3,048,671, or 20 per cent., and the southern 1,134,296, or 7·8 per cent. Wales, exclusive of Glamorgan, contained 713,301 inhabitants, or 4·8 per cent. of all England; York, 1,490,583, or 9·9 per cent. The population of the mining districts amounted to 987,776, or 6·6 per cent., and that of the four metropolitan counties to 2,866,622, or 19·1 per cent.

It has already been shown that the official tables, from the omission of the summary convictions, cannot be in any way used as evidence of the *actual* amount of crime committed or detected in the country; we shall not therefore attempt to use them for that purpose: but as that omission is universal, it will affect all parts equally, or nearly equally. The only differences which suggest themselves as likely to arise, may be occasioned by superior facilities, in some counties, for the prosecution of offenders at the assizes, or by variations in the practice of individual magistrates and petty sessions; but the latter circumstance will not much influence the results, as those authorities being numerous in each county, and all independent of each other, the differences will probably very nearly balance one another, and the average variation of each county from this cause will be trifling. The former circumstance will have a greater influence; still the Returns appear to afford the means of ascertaining the *relative* amount of crime detected, or at least the relative nature of crime detected, in each county; but they will not show the relative amount of crime committed, because that will depend entirely upon the comparative efficiency of the police. The *actual* amount of crime committed can only be ascertained by means of a public officer charged to take cognizance, and make a record, of every offence of which he can obtain information. The following statements will therefore indicate the *relative* condition, first of each division, and then of each county as regards crime detected, or, in other words, criminals brought to trial.

Number of Offences in different Districts.

For the sake of easier comparison, we will adopt the proportion of all the criminals to the total population as unity (1·00), and examine how each district, tested in the same manner, exceeds or falls short of that average.

How far the deductions, drawn from these tables, are invalidated by the acknowledged difference in the efficiency of the police in the several districts cannot be estimated; but although this circumstance may have considerable influence upon the proportions, it appears very doubtful whether it will destroy the general results, which are marked by such great and consistent differences: at all events the statement will afford evidence of the comparative activity of the police in the several counties.

COMPARISON OF DISTRICTS.						
Agricultural, Eastern	.	.	.	.	.	1·07
,, Southern	.	.	.	.	.	1·01
,, Total	.	.	.	.	.	·99

Manufacturing, Northern	.	.	.	.	1.08
„ Southern	.	.	.	.	1.30
„ Total	.	.	.	.	1.14
York	.	.	.	.	.60
Wales	.	.	.	.	.31
Mining	.	.	.	.	.45
Metropolitan—Middlesex	.	.	.	.	1.61
„ Other Counties	.	.	.	.	1.23
„ Total	.	.	.	.	1.44

COMPARISON OF COUNTIES.

Agricultural.			
Eastern.		Southern.	Other.
Hertford.....	1.34	Somerset ...	1.27
Oxford	1.13	Hants	1.16
Norfolk	1.09	Wilts	1.08
Suffolk	1.08	Sussex .....	.97
Berks	1.07	Dorset.....	.89
Cambridge... 1.02		Devon .....	.74
Bedford	1.01		
Bucks.....	1.01	Average..	1.01
Northampton. .86			
Huntingdon.. .85			
Rutland..... .71			
Average...	1.07		

Manufacturing.			
Northern.		Southern.	Mining.
Lancaster... 1.18		Warwick ... 1.42	Cornwall
Stafford 1.12		Gloucester .. 1.42	Glamorgan
Chester..... 1.11		Worcester .. 1.09	Northumberland. .45
Leicester ... 1.11		Monmouth . .85	Durham
Nottingham .86			Kent
Derby .....	.56	Average.. 1.30	Average..... .45
Average..	1.08		Average..... 1.23

From the first of these tables it appears that the metropolitan county exceeds the average by 61 per cent., and the manufacturing district exceeds it by 14 per cent. The agricultural district is 1 per cent. less than the average; York, 40 per cent.; the mining district, 55 per cent.; and Wales, 69 per cent. Thus crime in the metropolis appears to be three-fifths more frequent than in the agricultural district, and two-fifths more frequent than in the manufacturing district. The contrast with the mining districts and with Wales is still more striking; the proportion being nearly four times as great as in the former, and more than five times as great as in the latter. An examination of the several counties separately proves the correctness of this method of comparison, and tends to confirm the deductions which may be drawn from the results. Of these we will enumerate the chief, and then show the support which they derive from a reference to the several counties.

1st. Crime prevails to the greatest extent in large towns.

2nd. The difference between manufacturing and agricultural counties, in which the influence of large towns is not much felt, is not very great.

3rd. Crime is very much below the average in mining counties.

4th. And it is still less frequent in Wales and in the mountainous district of the North of England.

In proof of the first assertion we may adduce the following facts:—The proportion of criminals in Middlesex far exceeds that of any other county, and an excess of so uniform and great an amount that it cannot be accounted for by accident is observable in all the counties which adjoin the metropolis. Hertfordshire, which is well known to be within reach of the evil influences of the metropolis, is the only county in the eastern agricultural district which exceeds in any remarkable degree the average of that district, and its marked approximation to the metropolitan counties, proves that its proximity to London is the chief cause of the difference. Somerset and Hampshire considerably exceed the average of the southern agricultural district; the former contains Bath, and the latter Portsmouth. Warwick and Gloucester are similarly distinguished in the manufacturing districts—Birmingham in the former, and Bristol and Cheltenham in the latter, appear to cause the preponderance. Another circumstance may increase the effect produced by the first two of these towns—they are both situated on the borders of their respective counties; Birmingham being within one or two miles of the two adjoining counties: hence a number of offences committed out of the counties of Warwick and Gloucester, but on the confines of those immediately adjoining, are included in the Returns for the former, in consequence of their being perpetrated by inhabitants of Birmingham and Bristol, who are apprehended and committed for trial within those towns.

With regard to the second point, it will be seen that the average of the northern manufacturing district, although it includes Lancashire and Cheshire, is only 1 per cent. greater than the eastern agricultural district. If Lancashire, which contains many large towns besides Liverpool and Manchester, were excluded, the average would be considerably less. Probable causes have been assigned for the excess of crime in Warwick and Gloucester. If those counties and Lancashire be excluded from the valuation, the average of the remaining manufacturing counties is exactly equal (each being 99 per cent.) to the average of all the agricultural counties.

The third position is incontrovertible, for the proportion of criminals in all the mining counties, although widely separated from one another, is uniformly less than half the average. Derbyshire also, in which much mining is carried on, but which has been placed among the manufacturing counties, scarcely exceeds half the average. This fact would almost afford a sufficient reason for transferring this county to the mining division.

With respect to the fourth point, viz. the infrequency of crime in mountainous districts, it will be seen that not only is Wales two-thirds below the average, but that Westmoreland is the same, and Cumberland is not quite one-half.

Nature of Offences in different Districts.

The next subject of inquiry is the nature of the offences committed in the several districts, and this comparison will not be subject to the same doubts as the last, arising from differences in the efficiency of the police, as it must be supposed that all classes of offences will in general be equally affected by that circumstance. The relative proportions therefore of the principal classes of offences to the population of each

district, calculated in the same manner as before, the totals of each being taken as unity, will be found in the following table:—

Description of Offences.	Agricultural.	Manufacturing.	York.	Wales.	Mining.	Metropolitan.	Middlesex.
Sexual . . . . .	.79	1.07	.73	.33	.60	1.00	2.20
Malicious against property	1.58	.85	.48	.43	.63	1.08	.39
„ „ the person	.80	.91	.48	.54	.59	1.21	2.61
Larceny . . . . .	.95	1.15	.62	2.52	4.29	1.23	1.61
Fraud . . . . .	.84	1.11	.27	.43	.53	1.08	1.95
Housebreaking	1.13	1.13	.45	.37	.37	1.44	1.05
Robbery	1.19	1.13	.53	.27	.52	1.14	.97
Poaching	1.67	1.14	.60	.45	.09	.67	Nil.
Coining . . . . .	.64	1.11	.22	.22	.54	1.33	2.94
Riots	1.22	1.16	.44	.83	.66	1.15	.52

From this it will be seen that sexual offences are more than double the average in Middlesex, and somewhat exceed it in the manufacturing counties; on the other hand, they are $\frac{1}{5}$ th less in the agricultural counties, $\frac{1}{4}$ th in York, $\frac{2}{5}$ ths in the mining counties, and $\frac{2}{3}$ rds less in Wales. This great difference in the four last districts arises partly from the small number of persons who are committed in them for keeping disorderly houses.

Malicious offences against property are nearly 60 per cent. above the average in the agricultural districts, and somewhat greater in the counties surrounding the metropolis. In Middlesex they are less frequent than in any other district. The offences by which these differences are caused are arson and killing and maiming cattle. It is remarkable how small a number of cases of arson occur in Middlesex. During the last five years only 15 persons have been committed in that county for capital arson, and 3 for attempts at arson, averaging less than 4 in a year.

Malicious offences against the person exceed the average in Middlesex to the extent of 160 per cent.; but this is chiefly owing to a great excess in the number of assaults. In attempts to maim and murder, and in manslaughter, the difference is not great, and in murder the proportion is very much in favour of Middlesex, as will appear from the following comparison:—

Districts.	Assaults.	Attempts to Maim and Murder.		Manslaughter.		Murder.
Agricultural . . . .	.77	..	1.11	..	.88	1.00
Manufacturing . . .	.72	..	1.09	..	1.38	1.43
York . . . . .	.34	..	.73	..	.79	.65
Wales . . . . .	.39	..	.60	..	1.04	.56
Mining . . . . .	.53	..	.62	..	.75	.48
Metropolitan . . .	1.31	..	1.11	..	.91	1.35
Middlesex	3.51	..	1.31	..	.95	.52
Average	1.00	..	1.00	..	1.00	1.00

The agricultural counties exhibit the exact average as regards murder. In assaults and manslaughter they are below the average, and only slightly above it in attempts to maim and murder. In manslaughter and murder the manufacturing counties are $\frac{1}{3}$ rd above the average. In the three metropolitan counties assaults and murder exhibit a similar amount of excess; but in Middlesex, assaults are 251 per cent. above the average, while manslaughter is 5 per cent. and murder 48 per cent. below the average. These results in the metropolitan counties probably arise from the presence of a numerous police force, which, by affording

the means of immediate arrest in cases of assault, augments the number of offences of that class brought before the magistrates, while it prevents quarrels from proceeding to a more serious or fatal termination. In this point of view the result is very satisfactory, as affording a striking, and hitherto unobserved, evidence of the utility of an efficient system of police.

In the next class of offences, thefts without violence, Middlesex is 61 per cent., and the manufacturing counties are 15 per cent., above the average: the agricultural counties are 5 per cent. below the average. There is a remarkable excess in Wales and in the mining counties, the former being 152 per cent. and the latter 329 per cent. above the average. This result is confirmed by a comparison of the several classes of offences in these two districts; and hence the fact may be considered to be established, that thefts without violence are the prevalent crimes in these parts of the country. In Wales 61 per cent. of all the offences, and in the mining counties 71 per cent., belong to this class.

Frauds are nearly double the average in Middlesex; in the manufacturing district they exceed the average by 11 per cent., and in the agricultural districts they fall short of it by 16 per cent.

Among the crimes with violence, housebreaking is exactly equal in the agricultural and manufacturing districts; and, strange to say, is more frequent there than in Middlesex by 8 per cent. But there is a still greater excess, amounting to 40 per cent., in the counties which surround the metropolis, including Hertford. This is an evidence either of the effect of a well-organised and efficient police in preventing this crime in a crowded city, or of the greater temptation and superior facilities which present themselves for its commission in the outskirts of a city.

With regard to violent robberies the proportion is greatest, and exceeds the average by 19 per cent., in the agricultural district. It is about equal in the manufacturing counties and in those adjoining the metropolis. In Middlesex it is 3 per cent. below the average, which affords another proof of the benefits arising from a good system of police.

Poaching, as might be expected, is much more frequent in the agricultural counties than in other parts, but in the manufacturing district it also exceeds the average. In the mining counties it is very rare: in Middlesex there was only one case during the five years.

Coining prevails to a much greater extent in the metropolis and its neighbourhood than elsewhere, but it also exceeds the average in the manufacturing districts. In the agricultural counties it is one-third below the average.

Riots and assaults on peace-officers are most frequent in the agricultural counties, but do not much exceed the proportion which exists in the manufacturing counties and in those adjoining the metropolis. In Middlesex itself they only amount to one-half the average, although common assaults have been shown to have exceeded it by 250 per cent. In Wales there is a great excess beyond the proportion which that principality holds in most other classes of crime.

The county of York presents no feature worthy of remark in any particular class of crime, but it is uniformly greatly below the average.

Reviewing each district separately, there is in Middlesex a great excess of assaults, coining, sexual offences, and fraud, exceeding, or nearly equalling, double the average. Manslaughter, housebreaking,

and robbery are about the average; riots and murder are $\frac{1}{2}$, and malicious offences against property $\frac{3}{5}$ ths less than the average. Poaching appears not to be practised in the county.

In the three metropolitan counties of Surrey, Kent, and Essex, manslaughter and poaching are below the average; sexual offences are exactly at the average; malicious offences against property, frauds, attempts to maim and murder, robbery, and riots, are from $\frac{1}{12}$ th to $\frac{1}{7}$ th in excess; larceny is $\frac{1}{5}$ th, assaults and murder are $\frac{1}{3}$ rd, and housebreaking, is nearly $\frac{1}{2}$ in excess.

In the manufacturing counties, malicious offences against property and assaults are considerably below the average. All other offences are from $\frac{1}{14}$ th to $\frac{1}{6}$ th in excess, except manslaughter and murder, which average $\frac{2}{5}$ ths in excess.

The agricultural counties rank next. In these, coining, assaults, sexual offences, and manslaughter, are from $\frac{1}{3}$ th to $\frac{1}{3}$ rd below the average. Larceny is $\frac{1}{20}$ th below it, and murder is exactly the average. Attempts to maim and murder, housebreaking, robbery, and riots, are from $\frac{1}{5}$ th to $\frac{1}{5}$ th in excess; and malicious offences against property and poaching are more than $\frac{1}{2}$ above the average.

In York no class of crime equals the average. Manslaughter is $\frac{1}{3}$ th, and murder $\frac{1}{3}$ rd, less. Sexual offences and attempts to maim and murder are $\frac{1}{3}$ th less. Larceny is $\frac{2}{5}$ ths less. The remaining offences are about $\frac{1}{2}$ of the average, with the exception of fraud, which amounts only to $\frac{1}{4}$ th, and coining to $\frac{1}{3}$ th.

In the mining counties almost all the classes of offences range from $\frac{3}{5}$ ths to $\frac{2}{5}$ ths less than the average, except larcenies without violence, which exhibit an enormous excess, being $4\frac{1}{4}$ times as great as the average, and poaching, which amounts only to $\frac{1}{10}$ th of the average.

Offences in Wales vary from $\frac{1}{2}$ to $\frac{3}{4}$ ths less than the average, with the exception of riots, which are only $\frac{1}{5}$ th less; manslaughter, which slightly exceeds the average, and thefts without violence, which, as in the mining counties, greatly exceed the average, though not to the same extent, being only $2\frac{1}{2}$ times as great.

We will not at present extend the inquiry to the several counties of England, but the local interest which must attach itself in Birmingham, to the criminal statistics of the county of Warwick, is an inducement to make one exception, and to examine that county with the same minuteness as the several districts. A comparison of each class of offences in Warwick will give the following results:—

	Average of all England.	Warwick.	Difference.	
			Excess.	Deficiency.
Sexual Offences	100	•58	••	•42
Malicious Offences against Property . .		1•22	•22	••
Assaults		•55	••	•45
Attempts to Maim or Murder		1•33	•33	••
Manslaughter		•81	••	•19
Murder		1•33	•33	••
Stealing without Violence		1•44	•44	••
— by Fraud		•97	••	•03
Burglary and Housebreaking		2•89	1•89	••
Robbery		2•73	1•73	••
Poaching		1•31	•31	••
Coining		1•70	•70	••
Riots and Assaults on Peace-Officers . .		1•04	•04	••

From this it appears that the greatest excess in this county exists in cases of housebreaking and robbery, and that the amount in these two classes is nearly 3 times the average of England and Wales. In coining there is an excess of nearly $\frac{3}{4}$ ths; in stealing without violence, of nearly $\frac{1}{2}$; in murder and attempts to maim or murder, and in poaching, of $\frac{1}{3}$ rd; and in malicious offences against property, of $\frac{1}{3}$ th: stealing by fraud, and riots, are about the average; manslaughter is $\frac{1}{3}$ th less; and assaults and sexual offences are little more than $\frac{1}{2}$ of the average. The low rate of the latter is owing chiefly to the small number of committals for keeping disorderly houses. In the five years there were only 6 persons charged with this offence, while in Lancashire there were 248 persons charged during the same period.

Sex of Offenders in different Districts.

There are considerable differences in the proportion which females bear to males in the several districts of England. Upon the average of the kingdom, female offenders amount to 17·2 per cent. of the whole number. In Middlesex the proportion is 24·1 per cent.; in the manufacturing districts 17·8 per cent.; and in the agricultural counties 13·6 per cent.; the difference between the former and latter being as much as 10·5 per cent. In the mining districts it is as high as 21·1 per cent., but the excess exists only in the two counties of Glamorgan and Northumberland.

The counties, taken separately, exhibit many irregularities, which require further investigation. In Devonshire the proportion is 25 per cent., exceeding even that of the metropolitan county. In Lancashire it is 22·5 per cent.; while, on the other hand, it is as low as 7 per cent. in Buckinghamshire and Bedfordshire, and does not exceed 8 and 9 per cent. respectively in Hertfordshire and Essex. In the eastern agricultural district it is 10·3 per cent., while in the southern district it is 16 per cent. An examination of the nature of the crimes committed by females in the several counties will throw light upon the cause of these differences, but it will be a work of considerable labour, and must for the present be deferred.

Ages of Offenders in different Districts.

The first part of the next table shows the actual proportion of offenders at each age in the several districts, and the second part exhibits the relative proportion of the same to the average of the whole, from which the comparative frequency of crime at particular ages in each district may be deduced. [See Table next page.]

The following are the principal results:—There is, first, a marked difference in the two sexes, the proportions of which are frequently reversed, as will be immediately shown. In the agricultural districts, as well as in Yorkshire and in Wales, which partake in a great measure of the same character, crime is considerably below the average at the early periods of life among the males, but rather above it among the females. In the manufacturing districts, during the early periods of life, it rather exceeds the average in both sexes. In the mining districts there is a great excess in both sexes under the age of 12, but in the next three periods of life the proportion falls below the average in both, and increases considerably beyond the average at the advanced

Ages.	Males.							Females.						
	Agricultural.	Manufacturing.	Wales.	York.	Mining.	Middlesex.	Average.	Agricultural.	Manufacturing.	Wales.	York.	Mining.	Middlesex.	Average.
Actual Proportion.														
Under 12	1.4	1.8	1.0	1.1	2.7	2.5	1.8	1.3	1.6	1.8	1.5	1.8	1.3	1.5
From 12 to 16	8.4	11.2	5.6	8.7	10.6	13.1	10.3	9.1	8.3	3.6	8.6	8.3	8.8	8.6
17 . 21	29.2	30.8	22.3	30.1	26.1	32.8	30.4	27.1	28.1	14.6	27.5	22.7	24.2	26.6
22 . 30	35.1	31.7	34.4	35.3	32.1	27.4	32.1	31.6	32.3	33.8	33.2	30.7	31.2	31.5
31 . 40	14.4	14.3	19.3	15.1	15.8	13.4	14.3	15.5	16.2	25.4	14.5	18.8	17.8	16.5
41 . 50	6.6	6.3	9.5	6.1	7.1	6.5	6.4	8.8	8.4	7.5	8.9	10.2	10.6	9.2
51 . 60	3.2	2.7	6.1	2.5	4.1	3.1	3.1	4.3	3.8	6.8	4.1	5.9	4.7	4.3
Above 60	1.7	1.2	1.8	1.2	1.8	1.2	1.4	2.4	1.3	2.5	1.7	1.6	1.4	1.8
Relative Proportion.														
Under 12	73	100	55	61	150	139		87	107	120	100	120	87	
From 12 to 16	81	109	54	84	103	127		105	96	42	100	96	102	
17 . 21	96	101	73	99	85	108		102	105	70	103	85	91	
22 . 30	108	98	103	109	98	84		100	102	107	105	97	99	
31 . 40	101	100	135	105	115	93	100	94	98	154	87	114	107	100
41 . 50	103	98	148	95	109	101		96	91	81	96	111	115	
51 . 60	106	90	203	83	136	103		100	88	158	95	137	109	
Above 60	121	85	128	86	128	96		133	72	139	94	88	77	

periods of life. In Middlesex the excess under 21 is very considerable among the males, and is greatest at the earliest period, viz., under 12; while among the females the proportion is below the average under 21, and above it throughout the subsequent periods, until the age of 60, when, as in the male sex also, though in a greater degree, it falls below the average. In the agricultural districts, in Wales, and in the mining districts, the proportion increases considerably in the male sex, and in the two latter districts in the female sex also, beyond the age of 40; but in the manufacturing and metropolitan counties it decreases during the same period.

If these facts be combined with those previously noticed, that larcenies without violence are by far more prevalent in those metropolitan and manufacturing counties which contain a number of large and populous towns than in the agricultural counties in which such towns are comparatively few, and that those crimes are principally committed by persons at an early age, we arrive at the conclusion that the collection of large masses of the population in crowded cities conduces more than any thing else to the creation of those causes, whatever they be, which stimulate the commission of crime. Into these immediate causes we do not pretend to inquire. The data upon which the preceding remarks are founded afford no information upon the subject, and we will not throw suspicion upon the deductions which we have attempted legitimately to draw from them, by putting forth surmises which must be unsupported by facts. But we shall eagerly seek, and we trust that others will be led to seek, and to communicate to us, information which will tend to throw light upon those causes, and to which we venture to hope that the more perfect knowledge of the effects and tendencies of crime afforded by the preceding statements will serve in some measure as a useful guide.

First Report of a Committee of the British Association for the Advancement of Science, appointed at Newcastle, to inquire into the Statistics of the Collieries upon the Tyne and Wear.

[Presented and read before the Statistical Section of the British Association, 29th August, 1839].

As the Secretary of the Committee appointed at the meeting in Newcastle for the purpose of obtaining statistical returns connected with the mineral districts of the north of England, I have to report that the subject has occupied much of the attention of several members of the committee during the past year, and that preliminary steps have been taken for the accomplishment of some of its most important objects.

In sketching a plan according to which their inquiries were to be made, it appeared desirable that the questions they were to circulate should have reference to the three distinct branches of *mining, manufacturing, and moral* statistics of the strictly mineral districts; and a general outline of the whole plan was drawn up by the secretary, and printed for circulation among the members of the committee, and others to whom the subject was likely to prove interesting, or who might be capable of affording additional suggestions to the committee. Of this general outline the accompanying paper, marked No. 1, is a copy.

As many obstacles are foreseen by the committee in collecting the desired information on these several topics, it was considered prudent to commence by issuing queries connected with the moral statistics of the mining villages, with the view of feeling their way, and of gradually preparing the minds of the owners of mines and of mining property for those inquiries regarding the mines themselves, and their productions, which many of them are apt to regard as likely to interfere with their private interests.

The two sets of queries entitled *Statistics of a Mining or Pit Village* (of which copies are herewith sent, marked No. 2 and No. 3) were therefore drawn up, and an attempt has been made to obtain returns from several localities. The most complete of these returns we have yet received, and one which contains a great deal of valuable information, is from the villages of Hetton, in the neighbourhood of Durham. The papers marked Nos. 4 and 5 are copies of this return.*

Even to these questions, however, there is an unwillingness on the part of many to return answers; and the statistical section will have some idea of the unfounded jealousy which prevails in the minds of many from the reply we have obtained from a company employing nearly 3000 workmen, that "they wished no person connected with their concern to divulge anything belonging to their works in the form given." The return obtained from Hetton, however, encourages us to hope that before another meeting of the association we shall be prepared with a considerable body of information on this important branch of our inquiries.

The next branch taken up by the committee as least likely to awaken

* As the papers, Nos. 4 and 5, are the same as Nos. 2 and 3, with the addition of the answers from the villages of Hetton, the latter only are inserted in the Journal, and marked Nos. 2 and 3. For the same reason, the paper marked No. 6 in the report is omitted, and that marked No. 7 becomes No. 4, while that marked No. 8 becomes No. 5.

opposition was that of the *ventilation, drainage, and engineering* of the mines. The queries marked No. 6* were drawn up on this subject, with the assistance of members of the association, in various parts of the country, and especially in regard to steam-engines, of Mr. Enys of Cornwall. Mr. Robson, of Hetton colliery, has enabled us to lay before you (paper No. 7*) a specimen of the valuable information which these queries are likely to elicit.

In reference to the department of manufacturing statistics (see General Outline), one set of queries only has yet been drawn up, and these have for their subject the present state of the iron trade in the north of England. The importance of this branch will be apparent to the statistical committee; and it would be very desirable that returns to this or similar sets of queries should be procured from the most important seats of the iron manufacture.

In order to obtain these returns the committee have agreed to expend a portion of the grant placed at their disposal by the association, in remunerating schoolmasters or other persons who may undertake to furnish replies to any of the sets of queries, to the amount of from one to five pounds, according to the nature of the queries and the value of the return.

The committee begs leave to recommend the queries to the attention of the members of the section, and requests them to favour them with the communication of any information or suggestions which are likely to be of use in perfecting the sets of queries, or in obtaining replies.

(Signed) JAMES F. W. JOHNSTON.

Durham, 23rd August, 1839.

APPENDIX No. 1.

In order to render the information collected on this subject more complete, and to give it—however imperfect it may for some time be—the character of at least *a part of the whole*—it is proposed to arrange the inquiries under the three heads of *Mining, Manufacturing, and Moral*.

1. *Mining*.—Comprehending the *geographical extent*—relative geological position—number of seams or veins—average thickness—quality—(if coal, whether *fire* coal, *steam* coal, *lime* coal, *gas* coal, &c.)—variations in the thickness and quality in different localities—nature of roof and floor, or of the walls of the vein—absolute contents—probable duration—of deposits of coal—ironstone—lead, &c.

Localities of mines—when commenced—most ancient workings in the neighbourhood—date and mode of working, and quantity then raised—absolute quantities of mineral now raised. Cost of raising the mineral—loss of, on the surface. Proportion of the entire ore or mineral left in the mine—peculiarities in situation—mode of working—different qualities how disposed of—home consumption—Coast—London—Export (foreign)—distance from port of shipment—conveyed by canal or railway—the latter worked by inclined planes or locomotives. Does the railway belong to the proprietors of the mine—is it carried by way-leaves—average cost of way-leaves per mile, or per ton transported. Number of workmen (men, women, and boys) above and below ground

* See previous note.

—average earnings. Upper classes of workmen—overmen—superintendents—under viewers, &c.—how trained and selected. Safety of the mines—local difficulties in working—ordinary temperature of, evolutions of gas—kind and quantity of—number of accidents, &c. &c.

Faults.—Number and general direction—effects on the position and quality of the coal—deteriorated or the contrary—to what extent—converted into cannel coal?—(See *Murchison's Silurian System*, I., p. 117, and *Reports of the British Association*, VI., p. 84, of Abstracts.)

Water.—Feeders at different depths—quantity and quality of water—how removed—by engines or levels—effects of the workings on the general drainage or springs on the surface. *Machinery.*—Engines employed in pumping and winding—construction—power—work done—fuel consumed—consumption of iron, wood, oil, leather, ropes, kind of ropes, &c. &c.—(See *De la Beche's Geology of Cornwall*, p. 550). *Capital Invested.*—In the mine—in machinery—in means of transport—number of horses employed by the mine—tons of shipping, &c. &c.

2. *Manufacturing.*—Return of works immediately dependent on the mineral richness of the district—smelt mills—iron furnaces—glass works—alkali works—of chemical works in general—gas works—distinguishing those which work up the raw minerals of the district from such as depend on their locality for a supply of fuel only—quantity and quality of imported articles, and of the raw produce of the district consumed at each—approximate value of these—nature and value of manufactured products—where consumed—numbers of workmen—average earnings, &c.—healthiness of their employment—prevailing diseases—comparative longevity, &c.

State of any of these manufactures, as of those of iron, soda, and glass, at different distant periods. Ancient bloomeries—sites—extent—mode of smelting—date—owners, &c. &c.—(See *Murchison's Silurian System*, I., p. 122).

N.B. A distinct set of queries must be drawn up for each class of works.

3. *Moral.*—Including the statistics chiefly of the mining population—its amount in general, and in certain limited districts—in certain pitmen's villages, for example, on the Tyne and Wear, the Ayre, the Calder, the Don, &c., in the mining dales of the Tees, the Allan, the Wear, the Swale. Actual and average ages of the working population—number of children—state of education—general desire and facilities for—religious persuasion and means of religious instruction—general morality—state of crime, against property, against person—habits as to sobriety, &c.—size and general cleanliness of their houses—salubrity of the village—medical statistics in general—proportion of disabled workmen—benefit and accident societies (statistics of). *General Industry.*—Age at which work is commenced—average period of cessation of labour—number of hours employed—actual and average rates of wages at different ages—strikes and combinations.—(See *Statistical Society's queries*.) *Females.*—Occupation of—do any work about the mines—kind of education they receive—skill in sewing, knitting, cooking, &c.

On all these and other topics not touched upon in this sketch separate sheets of queries must be drawn up—adapted as far as may be to the localities for which they are intended.

APPENDIX No. 2.

Statistics of a Mining or Pit Village.

GENERAL AND EDUCATIONAL.

What is the general appearance of the village; the locality; the cleanliness; width and drainage of the streets?—Hetton Colliery workmen's dwellings form about 5 villages; about 6 miles east of Durham; generally clean; streets from 7 to 11 yards wide; properly drained.

Can you give a plan of the village?—No.

What is the population; is it entirely a mining population?—The population of these villages in 1831 was 5,887; it is principally a mining one.

What number of houses does the village contain?—1,117 houses.

How many rooms does each house usually contain?—The pitmen's houses are two rooms, and two rooms and attic.

In how many instances does more than one family inhabit the same house?—None.

What is the size of the rooms in general?—Some 15 and others 16 feet square.

Are there any instances in which brothers and sisters sleep in the same bed? How many? Of what ages?—Yes, under 9 years of age there are instances, but not of older.

Are there any instances in which a whole family, or more families than one, sleep in the same room? How many?—In about six instances a whole family sleep in the same room, but in no instances does more than one family.

Is personal cleanliness attended to?—Yes.

Is there a good supply of water; river or spring? At what distance?—Yes, of spring water, at short distances.

What is the general condition of the houses for cleanliness and order?—Generally clean and orderly.

Have they generally pictures on the walls; of what kind?—Yes; scriptural.

How many houses have gardens attached to them?—All.

Are they ornamental gardens, or otherwise; of what size?—Many are ornamental; others vegetable; about 240 square yards.

Are pigs, poultry, &c., generally kept?—Yes.

What increase or decrease has taken place in the population of the village during the last ten years?—Decrease, but trifling.

An extract from the parish register of the births and deaths during the last two years, giving the ages?—Births 379; deaths 228.

The proportion of marriages annually to the population?—About 1 in 120, or 50 per annum out of a population of 6000.

About what age do the miners usually marry?—About 23.

The proportion of legitimate to illegitimate births?—About 20 to 1.

Do you know if this proportion be greater or less than among the agricultural or manufacturing population of the neighbourhood? To what extent?—Less; cannot say to what extent.

Is the employment of females in the mines supposed to influence the number of illegitimate births; or to what cause is the above difference attributed?—There are no females employed in the mines here, and this is probably one cause of the difference; early marriages may be another.

The proportion of males to females in the village?

What number of children between the ages of four and fifteen are there in the village?—Cannot say.

What number are receiving instruction in schools?—1,281 children receive instruction in schools.

How many schools are there in the village?—Fifteen.

By whom are they supported, or superintended?—Supported partly by the Hetton Coal Company, (to the amount of 36*l.* per annum), and partly by payments made

by parties receiving instruction; are superintended by masters, &c., on their own risk, except in the case of the national school.

Are they conducted on any particular system?—In the case of the national school they are.

Are boys and girls educated together; and how many of each?—In some cases they are, but generally not; there are 785 boys and 496 girls at school.

How many children above five years of age are able to read and write?—Forty in every hundred.

How many adults out of one hundred, taken at random, are able to read or write?—Forty-eight in every hundred.

What is the *average* sum paid weekly for the education of each child?—Fourpence.

How many attend Sunday-schools; how many attend Sunday-schools, and no other?—837 attend Sunday-schools; 408 Sunday-schools, and no other.

Do boys, after beginning to work, attend any other but the Sunday-schools?—Many attend night-schools.

How many places of worship are there in the village, and of what sects?—Ten; Established Church, Wesleyans, Primitive Methodists, Baptists, and Wesleyan Seceders.

What may the average attendance at each place of worship be estimated at?—Church 380; Wesleyans 426; Primitive Methodists 370; Baptists 150; Wesleyan Seceders 14.

Are the Sunday-schools attached to the places of worship, and what average number of scholars attends each Sunday-school?—Sunday-schools are, Church (National) 135; Wesleyans 362; Primitive Methodists 280; Baptists 60; Wesleyan Seceders, no school.

Do the female children generally learn knitting, sewing, singing, &c.; are they taught to make their own clothes, or domestic economy in general?—In general they do, excepting singing at the day schools; at Sunday-schools they learn singing; girls are taught to make clothes.

Do the boys learn the use of carpenters' tools so as to be able to make or mend their own furniture?—Not at school; many pitmen have acquired a good knowledge of the use of carpenters' tools, and make their own furniture.

General remarks on the description of education received, and whether any attention is bestowed on the cultivation of the moral qualities? What process of training is adopted?—Are taught reading, writing, arithmetic, and the girls sewing in addition, with due attention to moral and religious instruction, particularly in Sabbath-schools; they learn a catechism, read the Bible and New Testament daily, and commit to memory portions of Scripture as tasks.

Is there much desire for education evinced by the parents of children in general?—Yes.

Are they given to reading; have they generally many books; of what kind?—Not generally; have generally a few books; mostly religious.

Are there any libraries in the village; of how many volumes; what kind of works chiefly?

Average rate of subscription, and of volumes issued monthly?

Are the teachers regularly trained, or do they teach because they are disqualified for any thing else?—In day-schools they are mostly regularly trained; in Sabbath-schools from a desire to improve youth.

What branches are they qualified to teach?—Reading, writing, and arithmetic in its early stages.

What are the terms for tuition?—Given before ($1\frac{1}{2}d.$ per week in the national school for each scholar).

Is there any salary in addition to the fees?—Yes, in the case of the national school the master receives 20*l.* and the mistress 15*l.* per year, from the respectable inhabitants.

In what estimation is the office of a schoolmaster held?—Not held in great estimation in general.

APPENDIX No. 3.

Statistics of a Mining or Pit Village (continued).

RATE OF WAGES, &c.

What is the average rate of wages earned by the able-bodied workmen, specifying the different classes; hewers, putters, banksmen, masons, miners, washers, smelters, &c.?—Hewers 3*s.* 9*d.*, putters 3*s.* 9*d.*, banksmen 4*s.* 7*d.*, waggonmen 3*s.* 6*d.*, enginemen 3*s.* 4*d.*, masons, 3*s.* 5*d.*, smiths 3*s.* 2*d.* per day, with house, firing, and garden in addition; the hewers for six, and all the others for twelve hours per day.

What are the average earnings of boys; of girls?—Boys about 16 years of age 2*s.* 3*d.* per day; no girls employed.

What is the average age at which boys and girls go to work above and under ground?—Boys 9 years; no girls employed.

Are boys and girls more generally employed now than formerly?—Boys not more; girls less than formerly, none being now employed, whereas 20 years ago they were.

Are there any circumstances peculiar to your district, which lead to the employment of boys at an earlier age, or of girls and women, in the mines?—No.

At what age do females generally cease to work in the mines?—None employed.

At what age do men usually become disabled from work?—About 66 years.

How many hours a-day do men usually work under-ground? Boys and girls? What distance do they go to work?—Men six to eight hours, boys twelve hours; distance under a mile.

Are they paid by the day or by the piece?—Sometimes one and sometimes the other, but mostly by the piece.

What quantity of coal can an able-bodied hewer work in a day?—About six tons.

Are the average earnings more or less now than formerly?—About the same.

For what time, and on what terms, are men usually employed?—Bound for a year on terms agreed upon between the parties.

Is it by written agreement, or otherwise?—By written agreement.

Are their houses generally granted as part of their agreement, or do they pay rent?—Have house, firing, and garden free.

What rent is usually paid?—None by the workmen.

Are the occupiers liable to be ejected at the will of the proprietor?—No, except in the determination of their hiring, and only then, after a further given time.

Average number of removals per annum?—About one in ten of the people employed.

Does the truck system prevail?—Not at all.

What shops exist in the village? Are they kept by persons engaged in any other calling or connected with the colliery?—The shops are all kept by people unconnected with the colliery.

Do the pitmen generally purchase their food, clothing, &c., in the village?—Partly so, and part at the principal neighbouring towns.

Do they pay ready money or take credit?—In the village they generally take a fortnight's credit, but if they go to towns they generally pay ready money.

What is their usual food; how is it generally cooked; and is there any thing remarkable in their clothing?—A due proportion of animal food, roast and boiled, with wheaten bread; their clothing is good, but nothing remarkable about it.

What is the usual occupation of the women?—Household affairs, and in harvest field-labour.

Do they generally keep the purse?—Yes.

General remarks on the style of living of the pitmen.—Are very regular in their habits; associate together at their leisure for amusement and instruction, such as is obtained at night schools; arithmetic, &c.

PAUPERISM.

What number and proportion of the population are unable to support themselves by their labour?—About one in thirty.

What number from old age, from sickness, or from infirmities occasioned by accident?—Cannot say.

How are these persons supported,—by relations, by the owners of the mines, or from the poor rates?—By the owners of the mines to the extent of 5s. per week, and from the poor's rate.

How many persons in the village receive relief from the poor rates?—One hundred and ninety-five.

Is the proportion of such on the increase or the decline?—On the increase, but trifling.

Are there any benefit societies established; if so, how are they encouraged; what is their nature and constitution; the weekly payment and allowances in case of accident, sickness, or death?—Yes; a copy of the rules of the principal one is sent herewith.

STATE OF CRIME.

Annual number of criminals for the last five years?—Cannot say; but few.

Proportion of male to female criminals?—Cannot say.

Of adult to juvenile delinquents?—Cannot say.

What number of crimes against property; what number against person?—Cannot say.

Age at which crimes against property prevail; age at which those against person?—Cannot say.

How many public-houses are there in the village?—Thirty public-houses, and and fifteen beer-shops.

Are they much frequented; and if on some days more than others, what days?—Very little, excepting on pay Fridays and Saturdays once a fortnight.

Is drunkenness prevalent, and to what extent does it appear to conduce to crime?—No.

General observations.

STRIKES.

What strikes have occurred during the last ten years?—Two; commencing 5th April, 1831, and 5th April, 1832.

What has been the duration of each?—One two months, and the other five months and a half.

What the objects, and how far successful?—Increased wages, but they did not succeed.

How did the men live in the interval; on their savings, or by credit?—On credit.

If on credit, did they buy their goods in the village?—Mostly.

Were their payments faithfully performed, or did the shop-keepers lose by the men proving faithless to their engagements?—In very many instances the shop-keepers suffered.

General remarks on the good or ill effects of the strikes.—The effects of the strikes were such as to throw many out of employment, and to increase the poor's rate for a time.

DISEASE, ACCIDENTS, &c.

General observations on the salubrity of the village, and the longevity of the inhabitants.—The villages are healthy, and many of the inhabitants live to the age of 84 or 85 years.

What diseases are most prevalent? Do they arise from the work in the mines?—Asthma is the most prevalent disease, arising partly from working in the mines, but only in half-broken constitutions.

Are there any diseases caused by the local peculiarities of the village? and if so,

specify their nature, and the causes, distinguishing them from those usually occasioned by working in the mines.—None.

Are there any diseases from which the workmen, in consequence of their occupation or habits, are supposed to be specially exempt?—None.

Of the different kinds of employment or classes of workmen, which is considered the most and the least healthful?—No difference observable.

Does change from one kind to another, as from mining to working above ground, tend to restore health?—In some cases, but very seldom.

Is disease supposed to be on the decline, or otherwise?—On the decline.

What number of accidents has taken place in the last five years?—Accidents to 35 individuals occur yearly on the average out of 975 people employed.

How many have terminated fatally; how many have permanently disabled the workmen?—About six on the average in a year have terminated fatally, and one permanently disabled.

State the nature of the accidents, and the general causes.—Principally fractures, dislocations, and burns.

Do they usually happen from events unable to be foreseen, or from carelessness of the men?—Fractures and dislocations are mostly boys, and are got carelessly, and in the case of burns often carelessly, but sometimes from unforeseen occurrences, such as unexpected feeders and consequent accumulation of gas; but to a trifling extent.

Are accidents diminishing or increasing in number? If less in number, does this arise from improvements in machinery, or from greater caution in the miners?—Diminishing, arising principally from greater caution in the miners through advice from the overlookers.

In what way is medical and surgical assistance supplied to the village, and what do the miners usually pay for such assistance?—Surgical assistance is supplied by the owners of the colliery gratis; medical assistance is also supplied gratis in case of accident, but for the families of the pitmen they provide it themselves.

Who pays for surgical assistance in case of accidents, the owners or the men?—The owners—*see answers to last query.*

Do the owners contract for the services of a surgeon, and at what rate?—A surgeon is appointed by the company at a salary of 160*l.* per annum, with coals for his dwelling-house.

APPENDIX No. 4.

Queries relative to the Ventilation, to the quantity of Water in the Mines, and to the Steam Engines employed in working them.

VENTILATION, &c.

How is the mine ventilated?—By coursing the air, and by rarefaction by furnaces.

Length of air courses?—From 3 to 11 $\frac{3}{4}$ miles.

Average velocity of air in the courses, and how estimated?—4 $\frac{1}{2}$ feet per second, taken by exploding a small quantity of gunpowder and timing the smoke. In the main roads is 12 feet per second.

Average cost of maintaining the air courses per mile?—10*l.* 10*s.* per mile per annum.

Average temperature of the air at the bottom of the shaft, and in the farthest workings?—Bottom of shaft 66°, farthest workings 70°.

Quantity of fire or choke damp?—Considerable.

Kind of lamp in use; why this lamp?—Davy's lamp; preferred, being considered perfectly safe.

Are you aware, from personal observation, of any circumstances in which a Davy lamp, in good order, has proved dangerous in the hands of a careful miner?—No, if properly used.

Average original cost of lamps, and expense of upholding them; expense of oil (to the workman)?—Original cost 7*s.* 6*d.* each lamp; expense of upholding 1*s.* 9*d.*

per hundred per day, or for 800 lamps about 200*l.* per annum. The colliery owners find the oil for the workmen.

Capital invested in lamps?—303*l.*

SPRINGS AND FEEDERS OF WATER.

Name and locality of the mine.—Hetton, about 6 miles east of the City of Durham.

Quantity of water in the mine.—In the mines feeders are met with, but they are inconsiderable.

In sinking, were feeders met with at different depths; were they copious or otherwise; and what was the quality of the water? (impregnated with salt, soda, iron, alum, &c.?)—Yes; in the first sinking the principal feeder was 2000 gallons; in the second 1000 gallons; and in the third 1600 gallons per minute; mostly fresh water; when impregnated at all, it is with iron.

Is the water applied to any economical purpose; in salt works, in feeding canals, driving machinery, &c.?—In driving machinery.

Does the occurrence of such springs render any special precautions necessary?—Tubbing; all the shaft feeders are tubbed off.

Is tubbing in use; if not why?—Yes.

Is the supply of water in the mine *constant* or *periodical*—does it vary at different times of the day, or at different seasons of the year? Does it appear on the whole to increase or the contrary?—Constant—stationary.

Do the workings appear to affect the general drainage of the springs on the surface?—Not at this colliery.

Is the mine drained by engines or levels, or both?—By engines only.

If any accidents have happened from inundations, can you give the particulars?—None have happened.

PUMPING ENGINES.

Name of the pit.—Hetton collieries; Eppleton pit.

Depth from which the water is raised?—180 fathoms.

Principal engines, when built, and by whom?—Eppleton engine, built in 1832 by the Hetton Coal Company's workmen.

Diameter of the cylinder?—78½ inches.

Load in lbs. per square inch on the piston?—10 lbs.

Length of stroke in the cylinder?—120 inches.

Velocity of stroke *in* and *out* of doors.

Time of rest relative to the number of strokes.

Condensing or non-condensing?—Condensing.

Double or single?—Double.

Expansive or non-expansive?—Non-expansive.

Steam pressure in the cylinder at the closing of the steam valve.*—10 lbs. per superficial inch.

Ditto ditto at the end of the stroke.*—Ditto ditto.

Mean steam pressure on the piston in lbs. per square inch.*—Ditto ditto.

Amount of expansion, if any (or proportion of the stroke cut off)?—None.

Contents in cubic feet of the clearance and nozzle spaces and of cylinder?—About 25 at the top and 11 at the bottom; nozzle spaces 1-5th of the cylinder, about 403 cubic feet.

Consumption of coal in tons (or parts of a ton) per hour?—4 tons per day.

Average number of strokes per minute?—3½ per minute.

Load in the shaft in lbs?—101,317 lbs.

Diameter of the working barrels of the pumps (or of the plungers)?—17½ inches.

Length of stroke in the pumps?—8 feet 6 inches.

* The answers to these three queries are obtained by the use of the indicator.

Number of lifts?—5.

Depth of the lifts?—One $33\frac{1}{2}$ fathoms; second, $43\frac{1}{2}$; third, 44; fourth, $43\frac{1}{2}$; and fifth, 11 fathoms.

Forcing or lifting pumps?—Lifting.

Is the draught diagonal or vertical?—In the engine part diagonal and part vertical; in the pit vertical.

Average quantity of water delivered per minute?—294 gallons.

Pounds lifted one foot high per ton of coal?—109,515,010 lbs.

WINDING ENGINES.

Depth from which the coal is raised?—175 fathoms.

Condensing or not condensing?—Both.

Diameter of the cylinder?—Condensing, 30, $38\frac{3}{8}$, $38\frac{1}{2}$, and $38\frac{1}{2}$; non-condensing, 24, 27, 30, and $38\frac{3}{8}$ inches.

Length of the stroke?—Condensing, 5, 6, 6, and 6; non-condensing, 5, 5, 5, and 6 feet.

Average number of strokes per minute?—22.

Mean steam pressure on the piston?—Condensing, 10 lbs. per square inch, and non-condensing 35 lbs.

Consumption of coal in tons?—47 tons in 12 hours for the eight engines.

Weight of the corf, loaded and empty?—Least corf and load $15\frac{1}{2}$ cwt.; 2 corves, $3\frac{1}{2}$; greatest 3 loaded. Tub and load $25\frac{1}{2}$ cwt.; tub alone $7\frac{1}{2}$ cwt.

Weight of the rope in the shaft?—Various weights.

Kind of rope, iron wire, chain? average wear and tear?—Flat hempen twined; average wear and tear $1\frac{1}{4}$ d. per chaldron of 53 cwt.

Time of drawing?—Least weight 1 minute; greatest weight 90 seconds.

Velocity?—1050 feet (one-fifth of a mile) and 700 feet per minute.

Average number of corves raised 100 fathoms in 24 hours?—50-40.

Whether cogged wheels are used or not, to alter crank velocity, &c., &c., and their relation?—Not used.

Are plain or fusee barrels used for winding; their relations to the velocity, &c.?

Pounds lifted one foot high per ton of coal?—40,642,560 lbs.

CYLINDERS.

Whether with or without steam jacket, and if hot air has ever been used in the jacket in lieu of steam?—Without; never used.

Cooling from radiation; how prevented; and with what?—Not provided against.

BOILERS.

Steam pressure in the boiler; load per square inch on the safety valve?—Condensing engine boilers 10 lbs. per square inch, and non-condensing 35.

Construction of the boiler?—Cylindrical.

Length, breadth, and depth of boiler; or diameter, if with internal flues; and thickness of plates?—None used with internal flues.

How protected from external air?—Placed in a house.

Area of surface exposed to fire?—560 feet for a 50 horse condensing engine.

Area of surface exposed in the flues?—6 feet per horse power of the engine.

Length and breadth of fire bars?—Length about 4 feet 8 inches, and breadth about 6 feet.

Water space in cubic feet, including steam pipes?—From 750 feet to 2500.

Steam space including steam pipes in cubic feet?—From 770 feet to 2620.

* This unit is large; the Cornish reports have for the unit an imperial bushel averaging 94 lbs. of Welsh coal. Captain Teague reported his engines with 112 lbs. or 1 cwt. for the unit. This latter unit may be adopted instead of the ton if preferred.

Evaporation in cubic feet per hour?—Cannot say.

Evaporation in cubic feet per ton of coal?—625 gallons (or 6·8 lbs. of coal per gallon).

Coals in tons, or part of a ton per hour?—From $\frac{1}{4}$ to $\frac{3}{4}$ of a ton per hour.

Cost and quality of the coal?—Small coals from the best seam; value 5s. per chaldron of 53 cwt.

Height of chimney; and why?—From 35 to 60 feet.

Temperature of the water supplied to the boiler?—About 100°.

Temperature of the water supplied to the condenser?—Cold water; different temperatures

See *Economy of a Coal Field*, p. 46; and *De la Beche's Report on the Geology of Cornwall*, p. 550.

APPENDIX, No. 5.

Statistics of the Iron Trade.

LOCAL HISTORY AND PRESENT STATE OF THE MANUFACTURE.

Any traces of ancient bloomeries in the district?

Can you state any particulars of their history, the mode of smelting, the ore and fuel employed, the quantity produced, by whom worked, when abandoned, &c.?

Quantity of pig and bar iron now manufactured?

Can you give a tabular view of the quantity produced per annum for the last 10, 15, or any other number of years past, with the average market price at each period?

ORES, COAL, AND LIMESTONE.

Iron Ores.—Kind and quality employed?

Richness in iron per cent.?

Kind of pig and bar iron (brittle, hot or cold, short, &c.) they yield, alone and mixed?

Geological position and extent in the district?

Distance of mines from the works, and price of ore at the mines or when delivered?

Any peculiarities in the ore or its mode of occurrence?

Average quantity of ore consumed in your works per annum?

Coal.—Kind of coal employed? its heating power, yield of coke per ton, &c.?

Distance of mine from the works, and price of coal when delivered?

Relative quantities used in the state of coke and of raw coal?

Average quantity of coal used per annum; *a*, in roasting the ore; *b*, in smelting, refining, &c.; *c*, for other purposes?

Limestone.—Kind of limestone employed?

Locality and distance from which it is brought?

By canal, railway, or otherwise?

Price per ton at the mine and cost of conveyance to the works?

SMEETING, &c.

Number of furnaces now at work? number out of work and of new ones building?

Produce per week of each furnace in tons?

Mode of smelting, by hot or cold blast, and why?

Pressure of the blast used in either case per square inch?

Do you find it necessary to mix any ore from a distant part of the country with the produce of the local mines?

Dimensions, form, and thickness of the furnace?

(The relative heights of the dam, tuyeres, and tynp plate from the bottom of the hearth, and the number and size of the nose pipes, may be included in the description of the furnace.)

Relative quantities of ore, coal, and limestone employed in manufacturing one ton of pig iron, by hot or cold blast, or both?

Coal used in manufacturing one ton of pig into bar iron?

Comparative quality, produce, and cost of iron by each process?

Has the quantity of ore or of all these minerals necessary to produce a ton of iron diminished of late years, and in what proportion?

Slags and Cinders.—Average per centage of iron contained in the finery cinder?

What quantity of this cinder is returned into the furnace?

What effect has it upon the iron when re-smelted with the raw ore?

What per centage of the whole iron contained in the ore is rejected in the state of cinder?

Is this quantity less now than formerly?

Is the slag applied to any useful purpose, in mending roads, &c.

WORKMEN.

Number of men and boys employed in the works, distinguishing their several departments or occupations?

At what age are boys admitted, and for what kind of work?

Wages of each class of workmen?

Their general habits, cleanliness, sobriety, industry, general intelligence, &c.?

Healthiness of their employments?

Is any class of them subject to special disease?

How many hours a day do they work, specifying each class of workmen?

For what time, and on what terms, are men usually employed? is it by written agreement?

Can you state any particulars in regard to the length of time during which the workmen have been in your service, or generally if they are given to change from place to place?

Changes in the Population of the Prussian States, during the Year 1838. Translated from Prussian Official Documents. By BERNARD HEBELER, Esq., F.S.S., Consul-General to His Majesty the King of Prussia.

THE census of the whole eight provinces of the Prussian dominions, completed at the close of the year 1837, including the army, showed

A population of	14,098,125.
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In the course of the year 1838,	
the number of births was	566,339,
„ „ „ deaths was	392,934,

There was, consequently, an increase of	173,405.
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which, leaving out of consideration the changes produced by emigration and immigration, would make the total population at the end of the year 1838 14,271,530.

On the average there have been for every 100,000 inhabitants living at the commencement of the year 1838, births	4017
„ „ „ „ „ deaths	2787
Excess of births	1230

The births, therefore, amounted to something above 4 per cent., the deaths to rather more than $2\frac{3}{4}$ per cent. on the number living, and the increase from the excess of the births over the deaths, to nearly $1\frac{1}{4}$ per cent.; or, there was 1 birth to nearly 25 living; 1 death out of nearly every 36 living, and an increase of 1 to every 80 of the population.

These numbers contain proportions so general, at present, in large masses in Central Europe, that the year 1838 may, in respect of the births and deaths, be considered as an average year. In the several divisions of the kingdom, the proportions were certainly very different, and the average births and deaths to 100,000 inhabitants living at the beginning of the year 1838, were as follows:—

District.	Births.	Deaths.	Increase.	District.	Births.	Deaths.	Increase.
Königsberg . . .	3737	3247	490	Liegnitz . . .	3747	2946	801
Gumbinnen . . .	3973	3073	900	Magdeburg . . .	3714	2743	971
Dantzie . . .	3995	2864	1131	Merseburg . . .	3875	2566	1309
Marienwerder . .	4463	3050	1413	Erfurt . . .	3845	2543	1302
Posen . . .	4262	2570	1692	Münster . . .	3276	2742	534
Bromberg . . .	4621	2543	2078	Minden . . .	4609	3013	1596
Potsdam . . .	3797	2661	1136	Arnsberg . . .	4017	2760	1257
Frankfort . . .	3853	2189	1664	Cologne . . .	4114	3071	1043
Stettin . . .	4038	2286	1752	Düsseldorf . . .	4098	2762	1336
Köslin . . .	4015	2278	1737	Coblentz . . .	3932	2725	1207
Stralsund . . .	3829	2318	1511	Trier . . .	3773	2629	1144
Breslau . . .	4145	3010	1135	Aix-la-Chapelle .	3780	2828	952
Oppeln . . .	4724	3367	1357				

Hence it appears that in the several districts there is a difference between the proportion of the population at the beginning and close of the year—

In the births, of 4724 to 3276;
 In the deaths, of 3367 to 2189;
 In the increase, of 2078 to 490.

Therefore, for an equal amount of population, the number of births varies in the proportion of 100 to 69; the number of deaths in the proportion of 100 to 65; and the amount of increase in the proportion of 100 to 24.

This difference depends chiefly upon the condition of the small farmers, the mechanics and factory population, the day labourers and domestic servants constituting by far the most numerous classes of the population, which condition is the result of circumstances that have gradually arisen and become fixed by law and custom. But it depends also, in some measure, upon temporary influences which arise unforeseen, and operate only during their short continuance; such as an animated or depressed state of trade in consequence of unusual events; plentiful harvests or failures of the crops, from extraordinary weather; and, especially, deviations from the regular standard of health in the inhabitants, or among those domestic animals, on whose increase the prosperity of the country essentially depends. In the year 1838 both kinds of influence presented themselves very perceptibly.

Upper Silesia is generally as much distinguished for a great number of births and also of deaths, as the province of Münster is remarkable for the reverse in both respects. This proved to be the case in 1838, when the district of Oppeln had the highest, and the district of Münster the lowest, number of births, in proportion to the amount of the popula-

tion. A great number of deaths is in some degree the natural consequence of a great number of births, as the decrement of life is not so high at any age as in early infancy; but independent of that, the duration of life appears to be shorter in Upper Silesia than in most other parts of the Prussian dominions. The district of Oppeln had, in 1838, from the effects of both causes, the highest average mortality; but, nevertheless, a surplus increase was left, somewhat exceeding the average of the whole kingdom. In the province of Münster the mortality is limited on the one hand by the small number of births, while on the other, the average duration of life seems to be considerable in that province. There is, however, but a small annual surplus increase, and during this year it is under a half of the average of the whole kingdom. The provinces of Pomerania, Prussia, Posen and Brandenburg, have in general the smallest mortality, with a considerable number of births; yet, in some years, important exceptions occur from failure of the crops and contagious diseases, which happen more frequently here than in the more thickly populated provinces of Silesia, Saxony, Westphalia, and the Rhenish provinces. Prussia Proper and Posen suffer the most from these causes; Pomerania and Brandenburg considerably less; and the regular advance of population is least disturbed in the districts of Köslin, Stettin, and Frankfort. In the year 1838 Frankfort (on the Oder) had the smallest proportionate mortality of all the districts; then Stettin and Köslin. These three districts, therefore, show a considerable proportionate increase; yet they are inferior in this respect to Bromberg, which, it is true, had a somewhat greater mortality, but only in consequence of a very great number of births. The district of Posen surpasses that of Frankfort slightly in the amount of increase, since the majority of deaths is counterbalanced by a still greater majority of births. Some years ago the entire province of Posen suffered very much from putrid fever, even before the first appearance of Asiatic cholera; it was afterwards severely attacked by that disease, and has only within the last year or two, from a better state of health and adequate harvests, regained its former position, in which it was particularly distinguished for its rapid advance in population.

At present the divisions of the country to the eastward of the Vistula, owing to great calamities, have made the least progress in increasing their population. They suffered with unusual severity from the cholera in 1831; since which time they have been visited with inundations, and their trade has experienced interruptions. On the whole, however, they were most injured by the cold and wet weather of recent years, which occasioned bad crops. Add to this that the stocks of potatoes which were not preserved with sufficient care, were frozen during the severe winter of 1837-8. In consequence of the distress resulting from these causes, the deaths in the southernmost parts of the district of Königsberg even exceeded the births; and the surplus births of the whole district were so small in number, that in respect of the increase on the present occasion, Königsberg takes the lowest place of all the districts in the kingdom. The district of Gumbinnen shows a much better result; yet it too is far below the average increase of the whole dominions. The average for the districts of Marienwerder and Dantzic is better in this respect alone, that the mortality west of the

Vistula was much less than to the eastward of that river, and by combining these two very dissimilar localities, a more favourable proportion is obtained.

In the four more densely populated provinces of the Prussian dominions, some districts are annually distinguished by particular circumstances connected with their population. Two of these, Oppeln and Münster, have already been more particularly mentioned, because with respect to their average number of births, they form the two extremes of the State. It remains, therefore, only to remark here, that the district of Liegnitz exhibits but a small annual increase, because the births, though not strikingly small in number, are still generally below the average of the whole kingdom; while the mortality, without being remarkably great, exceeds the general average. Thus, in 1838, the increase in this district was so trifling that none but those of Münster and Königsberg are below it in this respect.

In the province of Saxony, the district of Magdeburg is as much distinguished almost every year by its small advance in population as the districts of Cologne and Aix-la-Chapelle in the Rhine province. Yet they generally stand higher than the district of Liegnitz, and in 1838 the increase in them was considerably greater, although materially below the average of the entire kingdom. On the other hand, the districts of Minden and Trier are commonly very conspicuous for their rapid progress in population. Thus in the year 1838, Minden had a very great number of births, with moderate mortality, and consequently a considerable increase, approaching very nearly to that of Posen; although the circumstances of these two places, in regard to population and trade, are in other respects very different. But Trier did not in 1838 experience its usual increase; on the contrary, it was considerably below the average of the whole kingdom; for although the number of births was not much under the common standard, the number of deaths was far higher than in ordinary years. This, however, may be traced to causes, which existed in the year 1837, and which operated at that time even more prejudicially.

Calculating the increase by the surplus of the births during the year 1838, the state of the population of the respective districts at the close of that year, including the army, will be as follows:

Königsberg	750,113	Magdeburg	604,796
Gumbinnen	563,212	Merseburg	661,139
Dantzic	353,171	Erfurt	316,685
Marienwerder	506,054	Münster	407,440
Posen	801,924	Minden	423,937
Bromberg	389,046	Arnsberg	510,250
Potsdam	1,016,736	Cologne	431,148
Frankfort	748,336	Düsseldorf	777,081
Stettin	472,577	Coblentz	467,480
Köslin	371,766	Trier	451,907
Stralsund	162,852	Aix-la-Chapelle	375,029
Breslau	1,039,461		
Oppeln	818,346	Total	14,271,530
Liegnitz	851,044		

From this statement the number of inhabitants in the eight provinces of the Kingdom appear to be respectively as follows:

PROVINCES.	Area in Geographical Square miles.	Population at the close of 1837.	Increase during 1838.	Population at the close of 1838.
Prussia	1178·03	2,152,873	19,677	2,172,550
Posen	536·51	1,169,706	21,264	1,190,970
Brandenburg	730·94	1,741,411	23,661	1,765,072
Pomerania	574·46	990,285	16,910	1,007,195
Silesia	741·74	2,679,473	29,378	2,708,851
Saxony	460·63	1,564,187	18,433	1,582,620
Westphalia	367·96	1,326,467	15,160	1,341,627
Rhine Provinces	487·14	2,473,723	28,922	2,502,645
Total . .	5077·41	14,098,125	173,405	14,271,530

At the close of the year 1837 the number of married couples existing in the kingdom of Prussia was 2,362,445

To which were added, in the course of the year 1838, new marriages 123,629

But, on the other hand, the tables of this year do not state how many marriages have been dissolved by death or separation. It cannot, therefore, be ascertained what the actual number of existing marriages was at the end of the year 1838. It is only by means of the census, taken at the expiration of every third year, that we can discover in what degree the number of existing marriages has varied during the interval of three years, by the accession of new and the dissolution of existing marriages. The latest account of these changes is given in No. 210 of the "*Preussischen Allgemeinen Staatszeitung*" of the 31st July, 1838. If we compare the number of married couples in the Prussian dominions at the close of the year 1837 with the aggregate amount of population, it will appear that in 100,000 inhabitants there were, on the average, 16,757 married couples; or, that out of 100,000 inhabitants, 33,514, or a little more than a third, were at that time actually married. The number of new marriages contracted in the course of the year 1838, compared with the amount of population at the commencement of that year, gives an average proportion of 877 new marriages to 100,000 inhabitants; consequently, out of every 114 persons living, (or very nearly that number,) *one couple* was married in the year. The number of new marriages compared, on the other hand, with the number already existing, gives an average of 1 of the former to 19 of the latter. If the extinction were exactly equal to this increase, and if the latter, which is the proportion given by a single year, were a general result, we should deduce from these facts that nineteen years is the medium duration of a marriage. The year 1838 is, at all events, no uncommon year with regard to the number of marriages contracted or dissolved; and, therefore, the term of nineteen years may properly be considered as a very probable average duration of a marriage.

The proportion of new marriages contracted during the year 1838, to the number of married couples at the commencement of the year, differs materially in the several provinces of the kingdom. The number of new marriages to 100,000 inhabitants was as follows:—

In Königsberg . . . 806	In Koeslin . . . 836	In Minden . . . 1011
Gumbinnen . . . 857	Stralsund . . . 850	Arnsberg . . . 878
Dantzic . . . 879	Breslau . . . 928	Cologne . . . 809
Marienwerder . . 970	Oppeln . . . 977	Dusseldorf . . . 889
Posen . . . 943	Liegnitz . . . 850	Coblentz . . . 763
Bromberg . . . 1005	Magdeburg . . . 878	Trier . . . 760
Potsdam . . . 935	Merseburg . . . 796	Aix-la-Chapelle 78
Frankfort . . . 825	Erfurt . . . 801	
Stettin . . . 861	Münster . . . 803	

It appears from the above that the smallest number of marriages took place in the three contiguous provinces of Aix-la-Chapelle, Coblentz, and Trier; the greatest number, on the contrary, in two provinces far distant from each other, and differing essentially in almost all the circumstances of life, namely, Minden and Bromberg. The difference between the two extremes is so considerable, that the proportion of marriages to the same amount of population in Minden and Trier respectively was as 4 to 3. There is, however, with respect to marriages, too much of casualty in the results of a single year to admit of well-grounded inferences being drawn from them with reference to the state of morals and trade.

The total number of children born in wedlock in all Prussia during the year 1838 was 526,566; consequently, for every 100,000 married couples existing at the commencement of the year, there were very nearly 22,289 births during the year, that is, 2 births in the course of the year to about 9 marriages. Hence, if the duration of a marriage were 19 years, there would be 38 children born for 9 marriages, or, on the average, rather more than 4 children for each marriage during its whole continuance. This statement shows what a considerable number of marriages must be entered into under such circumstances as preclude the production of a numerous offspring. Among the new marriages which were contracted in the year 1838 there were—

Cases in which the bridegroom was under 45 and the bride under 30 years of age	93,403
Ditto in which the man was under 45, and the woman above 30 and under 45	20,164
Ditto in which the man was between the ages of 46 and 60, and the woman not above 45	5,462
Total of these late marriages	25,626
To these are to be added marriages from which, in general, no issue can be expected, namely, those cases in which the husband has already passed his 60th year	1,407
And those in which the husband is not above 60, but the wife has passed her 45th year	3,193
	4,600
Total of new marriages	123,629
Hence, out of 10,000 new marriages, the number of such as could be deemed seasonable was	7,555
Late marriages	2,073
Marriages contracted for mutual support, and without a probable chance of issue	372
Total	10,000

Only three-fourths, therefore, of the new marriages, consisted of such as, from the age of the bride, gave promise of an average number of

children, or where the age of the bridegroom rendered it probable that he would live to complete the education of his family. And even among these there are, probably, many cases not far removed from that limit, within which they would have come under the denomination of *late marriages*. A very great proportion of the female sex are compelled to earn a marriage portion by domestic servitude, or to wait for many years before a marriage, long ago concerted, can at length be concluded; because her betrothed husband acquires but late the means of supporting a family. Without doubt, frequent instances occur in some divisions of the kingdom, of marriages proving very unhappy because they are inconsiderately entered into before the means of sustaining a family are secured. This occurs more especially among the great mass of the people: first, where manufactures are actively carried on upon a large scale; and, secondly, where the country servants are married before they enter service.

In the year 1838, there were 39,773 illegitimate children born in the Prussian dominions; consequently, for every 100,000 births, there were 7023 illegitimate, which is very little more than 7 per cent. In the several provinces this proportion varies very much. Thus, in the province of Liegnitz, there were among 10,000 births, 1008, and in the province of Trier only 331 illegitimate; in the former, therefore, the proportion is three times as great as in the latter. But in the respective provinces themselves there is again so great a disparity in this respect between the districts they comprise, that nothing but a rigid investigation, extending to all these component parts, can present a clear view of the state of the different provinces in this particular. It appears to depend very much less upon the circumstances of general morality and education, than upon the value which the great bulk of the people attach to the preservation of female purity. Very rude and corrupt nations have much stricter notions in this respect than others far more enlightened and well-disposed. By this observation we do not mean to vindicate licentiousness, but to guard against partial inferences.

On comparing the number of illegitimate births with the aggregate number of inhabitants, the difference in the proportion of the total births to the total population must be taken into account. In years in which many children are born, the number of illegitimate births among them commonly rises simultaneously, although the proportion of the total births to the latter does not remain the same in all years. The results, therefore, of a single year, which alone have been here examined, do not, in this respect, lead to any practical conclusions.

It is not alone an increase in the number of births, but, on the contrary, a diminution of the number of deaths, that gives rise to such an advance of population, while it announces, at the same time, an advance in national prosperity. The increase of births may be only a consequence of growing licentiousness, which seeks nothing more than the gratification of sexual instinct, unmindful of the parental duty of caring for the proper education of the children resulting from the indulgence. Such an increase of the births enhances only the burthens, not the strength of a nation; the augmented expenditure which is thereby occasioned, serves only to fill the church-yards with premature corpses, the hospitals with cripples, and the gaols with criminals. The decrease of mortality, so far as it depends on human conduct and institutions, is, on the other

hand, an unerring sign of the progress of education and prosperity, or rather of both simultaneously, among the great bulk of the people. It can take place only when the rapid decrement of life, common to the early stages of existence, is moderated by the better nursing and protection afforded to pregnant women, to mothers while suckling, and to the helpless infants themselves; when the spread of contagious diseases is checked, the destructive fury of the elements opposed, and the effects of accidents guarded against by the excellence of the public institutions; and, finally and chiefly, when enervating poverty and consuming passion are stemmed with increasing vigour by the extension of the domain of reason and morality.

Among the number of children born in the Prussian dominions during the year 1838, which was 566,339, there were 21,233 still-born; consequently, to nearly every 27 births, there was *one* which cost the child its life. In some provinces, however, the proportion is very different. Thus, for instance, in Silesia, in the district of

Oppeln, the births were	38,140;	still-born	1011
Liegnitz	31,634;	,,	1740

therefore in the former there was 1 still-born child to 38 births; in the latter, 1 to 18. Consequently, Liegnitz had, in proportion to the number of births, more than double the number of still-born children, although the institutions and means of nursing and delivering pregnant women are certainly not inferior there to those in the district of Oppeln. In the Rhine province there was an almost equally remarkable difference between two districts immediately adjoining, and very similar in many respects. These were the following:—

Aix-la-Chapelle, births,	14,044;	still-born,	449;
Cologne, , ,	17,556;	,,	954;

consequently, in the former there was 1 still-born child to 31 births; in the latter, 1 to 18; that is, the number of children still-born was in such a ratio that, for an equal number of births, Aix-la-Chapelle had only three children born lifeless, while Cologne had five.

The smallest proportionate number of still-born children occurred, and nearly in the same degree, in two districts of the kingdom far distant from each other, and totally dissimilar in their habits and character.

These were Münster, which to	13,276	births had	325	born lifeless;
and Bromberg, , ,	17,611	,,	434	

In each district, therefore, there was 1 still-born child to nearly 41 births.

It by no means follows from this that the proportion of children born dead to the total number of births is merely accidental; but it is clear that even in districts where above 10,000 births take place annually, nothing less than the experience of a considerable number of years can furnish certain data for forming a judgment as to the causes of these differences.

Out of the number born alive, there died in the course of the year 1838, before the completion of their first year, 97,331. It may, however, with great probability be assumed, that only about two-thirds of these deaths were of children born the same year; since about one-third of them must have belonged to the number born in 1837, but whose first year of existence extended to 1838; on the other hand, probably a similar number of those born in 1838 will die in 1839 under the age of one year. The number born alive was,

In 1837, 536,754, of whom one-third	178,918
In 1838, 545,106, of whom two-thirds	363,404
Total	<u>542,322</u>

Out of these there died, according to the foregoing hypothesis, before completing their first year, the before-mentioned 97,331.

Hence, out of 100,000 born alive, the deaths under one year averaged 17,947, or not quite 18 per cent. This is to be regarded as a favourable result. The times are not yet far distant when the mortality of infants was so great that it was deemed satisfactory if only four-fifths of the children born alive reached the termination of their first year; and about a century back the number of children who did not complete their first year was estimated generally as one-fourth of the total births. In general, the mortality among children diminishes rapidly in the following years, and in 1838 the deaths at the under-mentioned ages were as follow:—

Above 1 year, and under 3 years of age,	46,861
„ 3 „ 5 „	17,804
„ 5 „ 7 „	8,697
„ 7 „ 10 „	8,128
„ 10 „ 14 „	6,853

Total above 1 and under 14 . . . 88,343

Consequently, the deaths in these 13 years were not nearly so numerous as those which took place in the first year alone, which amounted to 97,331. The total number of deaths (out of those born alive) before the commencement of the fifteenth year, which is generally considered the termination of childhood, appears accordingly to be 185,674.

At the close of the year 1837, the number of children under

14 years of age was stated in the returns as . . . 4,914,033

To these were added the children born alive in the course of the year 1838 545,106

5,459,139

From these must be deducted the number of such as, during the same period, successively attained their 14th year, and entered into the next period of life. The Statistical Tables do not give this number, but from the fact that by the same returns the number of persons living at the ages of 15 and 16 was 643,732, and that upon the average of this period of life 1662 died in the course of 1838 for each of those years, this decrease may be estimated at . . . 325,000

5,134,139

Of these there died during the year 1838, 185,674, as above stated that is, on the average, 3617 out of 100,000 young persons under 14, or 1 out of 27·6.

Further there died in the course of the year 1838—

Persons above 14 and up to 20 years of age	9,971
„ 20 „ 25 „	10,348
„ 25 „ 30 „	10,054
„ 30 „ 35 „	9,969
„ 35 „ 40 „	11,741
„ 40 „ 45 „	12,129

Total above 14 and up to 45 . . . 64,212

At the close of the year 1837, the total number of individuals of both sexes living in Prussia, whose ages exceeded 14, but were not above 45 years, was 6,669,824.

Now it is evident that, during the year 1838 changes must have taken place in this number, since, on the one hand, persons have been added from the younger class of ages, and, on the other, some have passed on to the higher class; but there is such a total absence of data whereby to ascertain these mutations with any certainty, that it seems by far more advisable to disregard them entirely. On this principle, then, we assume that the 64,212 deaths before stated were out of the 6,669,824 individuals living at the end of the year 1837. Hence it appears that in the course of 1838, out of 100,000 persons between the ages of 14 and 45, only 963 died on the average, or one out of 103·8 living.

Further we find that there died in 1838—

Persons between 45 and 50 years of age	11,862
„ 50 „ 55 „	14,088
„ 55 „ 60 „	15,714
Total between 45 and 60 . . .	<u>41,664</u>

At the expiration of the year 1837 the number of persons living, of both sexes, whose ages were above 45 and did not exceed 60, was 1,674,235. Leaving out of the question, as in the above instance, the mutations which this number has undergone during the year 1838, it is assumed that the 41,664 deaths before mentioned occurred among it in the course of that year. Therefore, out of 100,000 persons above 45 and not above 60 years of age, the deaths were 2,489, or one to 40·1 living.

Finally, there died in the year 1838—

Persons above 60 and under 65 years of age	19,550
„ 65 „ 70 „	18,026
„ 70 „ 75 „	17,686
„ 75 „ 80 „	12,568
„ 80 „ 85 „	7,275
„ 85 „ 90 „	3,426
„ 90 „ „ „	1,620
Total exceeding 60 years of age . . .	<u>80,151</u>

At the close of the year 1838, the number of persons of both sexes who had passed their 60th year, was 840,033. This class suffers diminution only from deaths; on the other hand, it is daily increased by the accession of persons completing their 60th year, and thus entering into the class exceeding 60 years. Now the total number of individuals in existence in the 15 years of life from the commencement of the 46th to the completion of the 60th year, being,—

According to the above statement	1,674,235
We carry, after deducting the deaths in one year, which amount to	<u>41,664</u>
And which will leave	<u>1,632,571</u>
Take one-fifth, say	<u>108,839</u>

Or rather, on account of the uncertainty of this estimate, the round number of	108,000
As the addition, in the course of the year 1838, to the total of individuals above the age of 60, existing at the end of 1837	840,033

And thus we shall have 948,033

for the number of persons living, out of which the above-mentioned 80,151 deaths occurred. Therefore out of 100,000 persons above the age of 60 the average deaths, in the year 1838, were 8455; or one to 11·8 living.

On a review of the mortality of the year 1838, at the several periods of life, we find that out of 100,000 persons living, the deaths at the respective ages were as follow:—

From birth to the completion of the 14th year	3617
From the commencement of the 15th to the completion of the 45th year	963
From the commencement of the 46th to the completion of the 60th year	2489
In the interval between the commencement of the 61st year and the extinction of life beyond that age	8455

This statement shows how low the rate of mortality is between the termination of the 14th and that of the 45th year, since it does not average annually even one per cent. of the numbers living between those ages. The latter years of childhood show, also, a very small decrement of life, for it amounts to not quite $3\frac{1}{2}$ per cent. for the entire period from birth to the end of the 14th year, although in the first year alone, the deaths are 18 per cent.

It would exceed our present limits to follow out the subject, in order to demonstrate the variations in the rate of mortality in the two sexes, and in the several provinces of the kingdom.

The following is a general classification of the deaths during the year 1838:—

Decay of nature	46,705
Still-born	21,233
In childbed	4,295
Casualties <i>a</i> Suicide	1,453
<i>b</i> Violent deaths from various other causes	5,494
<i>c</i> Small-pox	2,419
<i>d</i> Hydrophobia	36
	<hr/> 81,635

To the above number of deaths from the causes specified, must be added those from various diseases, viz.:—

<i>a</i> Internal chronic complaints	155,728
<i>b</i> Internal inflammatory do.	87,656
<i>c</i> Rapidly fatal diseases, as hemorrhages, quinsy (or inflammatory sore throat), apoplexy, &c.	27,947
<i>d</i> External diseases and injuries	7,018
<i>e</i> Uncertain	32,950
Total	<hr/> 392,934

Hence it appears that the mortality from these various causes was in the following proportion to 100,000 deaths, viz.:—

Decay of Nature	11,886
Still-born	5,404
In childbed	1,093
Suicide	370
Casualties	1,398
Smallpox	616
Hydrophobia	9
<hr/>	
Total	20,776
Internal chronic complaints	39,632
Internal inflammatory complaints	22,308
Rapidly fatal diseases	7,112
External complaints	1,786
Uncertain	8,386
<hr/>	
Total	100,000

From a statement published in No. 45 of the Medical Journal for the year 1835, the average mortality in the Prussian dominions from the above causes, during the fifteen years from 1820 to 1834, was in the following proportion to 100,000 of the population, viz. :—

Decay of nature	12,393
Still-born	4,711
In childbed	1,287
Violent deaths	1,656
Small-pox	819
<hr/>	
Total	20,866
Internal chronic complaints	37,937
Internal inflammatory complaints	23,283
Rapidly fatal diseases	7,272
External complaints	2,025
Uncertain	8,617
<hr/>	
Total	100,000

The cases of suicide and hydrophobia are included, with the accidental deaths, under the general head of “Violent Deaths,” because the special returns for suicide and hydrophobia were less authentic in former years. A comparison of these results of the experience of fifteen years with those of the year 1838 will enable us to form a judgment whether any, and what, causes of mortality were in an unusual degree active or inert during that year.

The difference which this comparison shows, with reference to the deaths from decay of nature, must be deemed the less important, because it must, in many cases, be doubtful whether the death of a very old person be occasioned solely by a decay of the constitution or by disease. On the other hand, it is undeniable that birth has become more frequently fatal to children, and that deaths by violent means are more common; while the number of deaths in childbed, and from the small-pox, has diminished.

The decrement of life from diseases, taken summarily, was, out of 100,000 deaths,—

According to the average of fifteen years	79,134
In the year 1838	79,224
<hr/>	
The difference of which numbers is only	90

and is so trifling that it can only be considered as accidental. In either case, nearly four-fifths of all the deaths were occasioned by diseases, which, however, proved fatal chiefly from the debility of childhood or advanced age. It may be assumed that the uncertain cases were, generally, from chronic complaints; because it is in those instances in which no medical man is called in that it most frequently remains doubtful which particular disease was the actual cause of death. However, the number of deaths from internal chronic complaints, and the uncertain cases, taken together, averaged per 100,000 deaths:—

According to the mean of fifteen years	. . . . .	46,554
During the year 1838	. . . . .	48,018
Difference	. . . . .	<u>1,464</u>

The amount of mortality from internal inflammatory diseases was, out of 100,000,—

According to the average of fifteen years	. . . . .	23,283
During the year 1838	. . . . .	22,308
Difference	. . . . .	<u>975</u>

The number of rapidly fatal cases was—

According to the average of fifteen years	. . . . .	7,272
During the year 1838	. . . . .	7,112
Difference	. . . . .	<u>160</u>

In the case of external diseases the numbers were—

According to the fifteen years' average	. . . . .	2,025
According to the calculation for 1838	. . . . .	1,786
Difference	. . . . .	<u>239</u>

From this it appears that the internal chronic diseases were certainly more fatal in 1838 than they were upon the average of fifteen years; the difference, however, amounts to only about 4 per cent., and is effectually compensated by the diminished rate of mortality in the other forms of disease. The majority of the internal chronic complaints commonly arise from excess, either of exertion or of indulgence; both will probably become more common as the state of society advances; as on the one hand there will be a greater stimulus to mental and bodily exertion, and on the other, the means of indulgence will be multiplied and rendered more easy of attainment. Whether the increased fatality of chronic diseases be really a consequence of a state of things otherwise so desirable, or of physical influences only, particularly the weather, it may be difficult to determine. At all events, nothing but the observations of many years will enable us to decide this point.

Report of an Inquiry into the Condition of the Working Classes of the City of Bristol. By C. BOWLES FRIPP, Esq.

[Read before the Statistical Section of the British Association, 29th August, 1839.]

At the meeting of the Association in Liverpool in 1837 I had the honour to submit to the Statistical Section the abstract of an inquiry into the condition of 275 families of the working classes of the city of Bristol.

The results of a similar inquiry on a more extended scale into the state of the working classes of some towns of Lancashire were at the same time communicated to the section by some members of the Statistical Society of Manchester; and, as it seemed very desirable to carry on the investigation which had been commenced in Bristol, as well as in other places, a grant was made by the council of the Association for the furtherance of these inquiries, on the express condition that the numerical results alone were to be communicated to this section. By means of this grant, and aided by some private contributions, the inquiry into the condition of the working classes of Bristol has been since carried on, and I have now the pleasure to lay before the Section a complete analysis of its results. The investigation was made personally by the agent of the Bristol Statistical Society, and in the mode which was formerly detailed to this Section. The time occupied in the inquiry, and in abstracting the facts collected, has been upwards of eighteen months, and the expense about 110*l*. It may give the section a better idea of the labour involved in the collection and arrangement of such a mass of details, when I state that the transcript of the agent's original memoranda occupies no less than 675 large folio pages, and what I may call the *Primary Abstract* is contained in 20 additional pages of a still larger size. A further condensation was required to effect a parochial classification of the results; and the *General Abstract* of the whole, which exhibits the social condition of nearly 6,000 families, comprising upwards of 20,000 persons, is what I have now to present to the Section.

The schedule of queries employed was that adopted by the Central Society of Education in their inquiry into the state of the poorer classes in Marylebone, with slight modifications and additions. A comparison of the results obtained by different inquiries of this kind may thus be readily made, which is a point of great importance.

In regard to the subject-matter of the inquiry, it is not requisite to offer any comment, as it sufficiently explains itself: but it may be proper to make one or two remarks on the rules observed by the agent in classifying the information on particular points. For instance, in determining the number of *families*, there seemed to be no other principle to follow than to include under this head every individual having to procure his or her own livelihood, and being singly responsible for the rent of the apartment (or part of the apartment) occupied. This circumstance explains the apparently low number of "persons per family," and the high proportion which the families "not having children" bear to those "with children," viz. as 10 to 18.

In a few cases the agent has found a wife or a husband deserted, and, as no account can be taken of the party absconded, the remaining parent has been classed with the widowers or widows. The return of "married persons" includes, therefore, an equal number of each sex.

With respect to the airy or confined state of the apartments, the agent has been left to form his own opinion; the point being one in a great degree relative to the habits of the inspector, and as to which no precise rule could be laid down. There is no reason to think that he has at all over-estimated the number of the families occupying confined and ill-ventilated apartments. The same remarks will apply to the return

of the families having sufficient or inadequate accommodation in cupboards and shelves.

In stating the number of families in possession of books, it has been thought best to include under this head all who had any tracts or mere portions of volumes, which not unfrequently occurs.

No test could be generally applied by the agent to ascertain the ability of the parents or children to *read* or *write*, and the fact therefore has been taken on their own testimony only. There can be no doubt that the degree in which these elements of instruction are possessed is far inferior to what might be inferred from the mere numbers stated in this return. As to the *ages* of the children, which have also been entered according to the statement of the parents, allowance must be made for some slight inaccuracies. It is probable, however, that these do not materially affect the result, as they have a tendency to balance each other. When a definite age is given, children who had not quite attained it, or who were a little beyond it, would by most parents be assigned to the specific year to which they were nearest.

The return of children attending *school* includes many who only receive Sunday instruction; but the precise number has not been ascertained.

The inquiry relative to the *small-pox* was not included in the schedule until several parishes had been gone through, and applies, therefore, only to 6,362 children out of the total number of 10,856. There can be no doubt, however, that the results presented are nearly the same as would have been afforded by a still wider examination.

In distinguishing the *religious profession* of the heads of families, the agent could only take their own statements on the subject. A large proportion of those returned as members of the Established Church must be considered as belonging to it, only because they have not attached themselves to any other religious body.

General Abstract.

The number of houses examined was 3,028; they contained 5,981 families, or, on an average, 1·97 families to each house. The number of persons of which these consisted was 20,717, which gives an average of 6·84 to each house, and 3·46 to each family.

The number of heads of families, with or without children, was—

		Per Centage Proportion.
Men married	3,880	84·6
single or widowers	703	15·4
	<hr/> 4,583	100
Women married	3,880	73·5
single or widows	1,398	26·5
	<hr/> 5,278	100
Total married	7,760	79·7
single or widowed	2,101	20·3
	<hr/> 9,861	100

The number of children was—

Boys	5,363	49·4
Girls	5,493	50·6
	<hr/> 10,856	100

The number belonging to each nation was—

		Per Centage Proportion.
English	5,220	87·3
Irish	501	8·4
Welsh	170	2·8
Scotch	15	0·2
Foreigners	27	0·5
Not ascertained	48	0·8
	<hr/> 5,981	<hr/> 100
Families having children	3,846*	64·3
not having children	2,135	35·7
	<hr/> 5,981	<hr/> 100
Families consisting of single persons.	1,163	19·4
two „	1,298	21·7
three „	990	16·6
four „	792	13·2
five „	691	11·6
six „	470	7·8
seven „	269	4·5
eight, or more	308	5·2
	<hr/> 5,981	<hr/> 100
Families occupying part of a room .	556	9·3
„ one room only .	2,244	37·5
„ two rooms .	1,439	24·1
„ three or more rooms	1,742	29·1
	<hr/> 5,981	<hr/> 100
Families occupying airy apartments .	3,569	59·6
„ apartments close and confined .	2,412	40·4
	<hr/> 5,981	<hr/> 100
Families having sufficient cupboards or shelves	3,688	61·7
Families having some, but deficient of cupboards or shelves	1,421	23·7
Families without any	872	14·6
	<hr/> 5,981	<hr/> 100
Houses with drains or sewers . .	2,398	79·2
„ without drains, or stopped .	630	20·8
	<hr/> 3,028	<hr/> 100
Houses with privies	2,451	80·9
„ without privies, or very bad .	577	19·1
	<hr/> 3,028	<hr/> 100
Houses with a good supply of water .	1,724	56·9
„ without, or very bad or deficient	1,304	43·1
	<hr/> 3,028	<hr/> 100
Families having religious books (bible or prayer-book, or both)	3,430	57·4
Families having other books or tracts, or parts of some	947	15·8
	<hr/> 4,377	<hr/> 73·2
Families not having any books or tracts (including 2 not ascertained)	1,604	26·8
	<hr/> 5,981	<hr/> 100
Families having prints of some kind on the walls	3,030	50·7
Families not having any (including 13 not ascertained)	2,951	49·3
	<hr/> 5,981	<hr/> 100

* As the number of married families was only 3,880, a considerable number of the single and widowed heads of families must have children.—Ed.

		Per Centage Proportion.
Families, clean and respectable . .	3,610	60·4
„ dirty and disreputable . .	1,095	18·3
„ in considerable distress . .	660	11·
„ condition not ascertained . .	616	10·3
	5,981	100
Heads of families depositors in sav- ings' banks, or members of benefit societies or trade clubs	940	15·7
Heads of families not depositors or members	4,973	83·1
Heads of families not ascertained . .	68	1·2
	5,981	100
Heads of families who can read or write (more or less)	5,122	51·9
Heads of families who can only read . .	2,523	25·6
Total who can read	7,645	77·5
Unable to read or write (includ- ing 12 not ascertained)	2,216	22·5
	9,861	100
Males who, according to their own statements, can use carpenters' tools so as to mend their own furniture . .	2,703	59·
Males who cannot use tools	1,880	41·
	4,583	100
Women who can sew, wash, and knit . .	297	5·6
„ who can sew and wash	4,859	92·1
„ who cannot sew or wash	122	2·3
	5,278	100

Rents, &c.

Families renting house or apartments from owners	3,298	55·1
Families renting house or apartments from tenants	2,666	44·6
Families occupying their own houses . .	13	0·3
„ apartments free	4	
	5,981	100
		£. s. d.
Average rent paid by 1,799 families for 1 room unfurnished	0 1 3 $\frac{3}{4}$	per week.
„ 943 „ 2 rooms „	0 1 11 $\frac{3}{4}$	
„ 790 „ 3 „ „	0 2 5 $\frac{3}{4}$	
„ 632 „ 1 room furnished	0 2 0 $\frac{3}{4}$	
„ 10 „ 2 rooms „	0 2 10 $\frac{3}{4}$	
„ 1,156 „ houses under 20%	9 9 8	per annum.
„ 59 „ „ 20% and above		
„ 4 „ free		
„ 588 „ not ascertained		
	5,981	
		Per annum. £. s. d.
Of the houses the lowest rent was	3 0 0	
„ the average rent of 47 not exceeding 5% was	4 10 9	
„ „ 561 above 5% and under 10%	7 17 11	
„ „ 608 below 10% averaging	7 12 9	
„ 548 of 10% and below 20% averaging	12 5 3	
„ 59 20% and upwards		

Children, &c.	Boys.	Girls.		
Of the age of 1 year and under	398	443		
„ 2 years	411	457		
„ 3 years	339	366		
„ 4 years	333	338		
„ 5 years	304	313		
„ 6 years	247	265		
„ 7 years	333	276		
„ 8 years	237	279		
„ 9 years	274	279		
„ 10 years	276	261		
„ 11 years	206	218		
„ 12 years	278	258		
„ 13 years	209	210		
„ 14 years	294	233		
„ above 14 years	1,219	1,294		
	<u>5,363</u>	<u>5,493</u>	=10,856	
				Per Centage Proportion.
Of whom are healthy	10,085	92.9		
„ unhealthy	771	7.1		
	<u>10,856</u>	<u>100</u>		
Children above 7 years old sleeping in same room with parents, or both sexes in same room.		4,752		
Children brought up to trade or useful occupation	2,687			
Children not so brought up (above 14 years old)	731	3,413		
Girls who can sew and wash	1,702	31.0		
„ sew only	1,350	24.5		
„ cannot sew, wash, or knit (old enough)	74	1.4		
Girls too young, or not accounted for	2,367	43.1		
	<u>5,493</u>	<u>100</u>		
Children at school not above 3 years of age	120	1.1		
Children from 3 to 14 years old	3,394	31.3		
„ above 14 years old	222	2.1		
	<u>3,736</u>			
Children not at school, not above 3 years of age	2,294	21.1		
Children from 3 to 14 years old	2,535	23.3		
„ above 14 years old	2,291	21.1		
	<u>7,120</u>	<u>10,856</u>		<u>100</u>
Children stated by their parents to be able to read and write.	2,010	18.5		
Children able to read only	3,934	36.2		
	<u>5,944</u>			
Children unable to read or write under 7 years of age	3,603	33.2		
„ above „ „	1,309	12.1		
	<u>4,912</u>	<u>10,856</u>		<u>100</u>
Children able to repeat the Lord's Prayer	6,504	59.6		
Children not able, or too young	4,352	40.4		
	<u>10,856</u>	<u>100</u>		

Payments by scholars :

		Per Centage Proportion.
Gratis (chiefly Sunday scholars)	1,425	38.1
At $\frac{1}{2}d.$ per week	6	0.2
1d. „	715	19.1
1½d. „	181	4.8
2d. „	650	17.4
	<hr/>	
3d. „	397	
4d. „	165	
5d. „	3	
6d. „	85	
7d. „	14	
8d. „	36	
9d. to 1s.	27	19.5
	<hr/>	
	727	
Paid for by friends	11	0.3
Not ascertained	21	0.6

Total 3,736 — 100

Religious Profession of Heads of Families.

Church of England	4,547	76.1
Roman Catholic	489	8.2
Methodists	223	3.7
Other Dissenters	589	9.8
Jews	5	0.1
Without any profession	81	1.4
Not ascertained	47	0.8
	<hr/>	
	5,981	100

Bodily Complaints.

Cripples	18	13.9
Spinal deformities and accidents	24	18.6
Paralytic, fits, Vitus's dance, &c.	48	37.3
Dumb	6	4.6
Blind	12	9.3
Idiots and insane	21	16.3
	<hr/>	
	129	100

Small Pox.

Natural Pox	1,632	25.6
Vaccinated	3,535	55.6
Inoculated	93	1.5
Neither	1,102	17.3
	<hr/>	
	6,362	100
Caught small-pox after vaccination	17	0.48 or 1 in 208.

Occupations of Heads of Families.

Occupations.	No.	Occupations.	No.
Labourers	1453	Laundresses	104
Shoemakers	476	Mariners and bargemen	99
Shoebinders	41	Butchers	78
Carpenters, cabinet-makers, saw- yers, and lathers	277	Shopkeepers (general)	60
Charwomen	272	Braziers, brass-founders, and bright- smiths	55
Paupers	233	Pipe-makers	55
Tailors	161	Glass-blowers and cutters	53
Painters, glaziers, tilers, &c.	157	Bakers	52
Masons and stone-cutters	135	Hostlers, grooms, and horse- keepers	51
Hawkers (general)	128	Curriers	48
Sempstresses and dressmakers	125	Brush, clog, and patten-makers	47
Smiths and farriers	115		

Occupations.	No.	Occupations.	No.
Engineers	44	Pensioners	21
Coopers	38	Toy-makers and turners	20
Servants out of place	35	Brick and tile-makers	19
Hawkers of fruit	34	Greengrocers	18
Comb-makers	32	Soapboilers	17
Maltsters and brewers	32	Pig and cattle-drivers	16
Brothel-keepers and prostitutes	32	Cab-drivers	15
Basket-makers	30	Confectioners	15
Hatters	30	Lodging-house keepers	15
Travellers	30	Midwives and nurses	15
Weavers	29	Trunk and box-makers	14
Gardeners	28	Hairdressers	13
Schoolmasters	28	Clock-makers	12
Spinners of flax and twine	27	Match-makers	12
Provision-sellers	26	Mechanics	12
Plumbers and block-makers	25	Shipwrights and carpenters	11
Rope and sacking-makers	25	Tobacconists	11
Wheel and millwrights	25	Harness and saddle-makers	10
Basket-women	24	Tin-plate workers	10
Milkmen	23	Other occupations giving employ- ment to less than 10 persons each	207
Police	23	No calling, incapable of work	176
Chair-makers	22		
Dealers in coal	22		
Ironfounders and ironmongers	22		
Coachmakers	21		
		Total	5681

Report on the State of Education among the Working Classes in the Parish of West Bromwich.

In the year 1837 two gentlemen residing near West Bromwich determined to institute a statistical inquiry into the state of education among the labouring classes in that parish, and for that purpose employed two agents to visit every family of that class. These persons noted the following particulars relating to each family, in a form with which they were provided, and were thus occupied for the space of several weeks.

West Bromwich is in the county of Stafford, about seven miles from Birmingham, with which town it is intimately connected. The number of families of the working class residing in the parish, with children under their roof, was 2193. About 550 other families were visited, but when it was found that they had no children living with them no further questions were asked. In some of these instances the children had left their parents for employment or other objects, and in others the parties consisted of young couples who had no children. No family belonging to the working class is known to have been passed over. The following abstract of the trades and occupations followed by the heads of the families will afford an exact notion of the character of the population. In a small number of cases the trade could not be exactly defined, and in some the father was dead:—

TRADES OR OCCUPATIONS OF HEADS OF FAMILIES IN WEST BROMWICH.

Connected with the manufactures of the neighbourhood.		Miscellaneous.	
Nature.	No.	Nature.	No.
Annealers of cast-iron ware	7	Boatmen employed on canals	27
Blacksmiths	91	Brewers	8
Boiler-makers	22	—— retail	26
Casters in iron	117	Bricklayers	44
Clerks, rough; stock takers in iron works	11	Brickmakers	21
Coachsmiths	36	Butchers	16
Coal-pit sinkers	14	Carpenters	39
Cover (iron) makers	6	Carters	24
Engineers, or men attending steam-engines	40	Coopers	5
Filers of iron work	49	Fruiterers	5
—— iron hinges	11	Gardeners	7
—— gun-locks	18	Hucksters	19
—— pistol-locks	17	Painters	8
Forgemen	65	Plasterers	5
Glass (crown window) makers	38	Plumbers	4
Iron works, men employed in	35	Sawyers	16
Miners or colliers	422	Shoemakers	54
Nailers, working at their own houses	137	Stonemasons	5
Packers	7	Tailors	15
Puddlers in iron-works	60	Bailiffs, gas-workers, saddlers, slaters, wheelwrights, each 3	15
Screw (wood) makers	4	Bakers, barbers, basket-makers, boat-builders (for canals), drovers, watchmen at works, each 2	12
Teasers or melters of iron in foundries	12	Carman, carrier, chair-bottom-maker, chimney-sweep, confectioner, horse-dealer, jeweller, maltster, mop-maker, pump-maker, tallow-chandler, tinman, each 1	12
Tinners of cast-iron hollow ware	11	Total Miscellaneous	387
Turners	9	Day-labourers	375
—— of cast-iron hollow ware	26	Unenumerated	163
Makers of bayonets, charcoal-blackening for foundries, patten-rings, and steel tools, grinders of iron goods, each 3	15	Total	925
Makers of balances, bottle-jacks, bridle-bits, and steel ornaments, brass-founders, and iron cover-stampers, each 2	12	Employed in manufactures	1268
Maker of bone-buttons, iron-shearer, iron roll turner, millwright, moulder of cast-iron ware, saddlers' ironmonger, each 1	6	Total	2193
Total	1268		

It will be seen how large a proportion of the population is engaged in manufactures; for if only one-half of the day-labourers and of persons whose occupations could not be defined be considered as employed in foundries and workshops, the manufacturing will exceed the miscellaneous population by 134 per cent.

Of the total number of families—

16 or 0.7 per cent.	had 1 room.
418 or 19.0	2 „
578 or 26.4	3 „
1181 or 53.9	4 „

Total 2193

1522, or 70 per cent., had gardens, which appears a large proportion in a purely manufacturing district; 192 kept a pig, and 8 a cow.

In 32 families (1.5 per cent. of the whole number), the mother was not alive; 57 mothers could sew, knit, wash, brew, bake, and make butter; in 301 they could do all but make butter, and in the remaining cases (1803), they could all sew, knit, wash, and bake. 1870 families had Bibles, 323 had no Bibles nor other books. The number of children residing with their parents was 7803—of these, 1428 were above 14 years, and 6375 below that age:—

Of those above 14	389 or 27.2 per cent.	could read and write.
„	568 or 39.8	read only.
„	471 or 33.	neither read nor write.

1428

Of the same number 1204 were employed in the parish and 29 out of it, while 195, or only 13 per cent. were unemployed.

Of the children under 14	2702 or 42.4 per cent.	went to school.
„	3103 or 48.7	did not go to school.
„	570 or 8.9	were too young for school, being under 2 years of age.

6375

Of the number at school	298 or 11 per cent.	could read and write.
„	1920 or 71	read only.
„	484 or 18	neither read nor write.

2702

Of the same number	235 or 8.7 per cent.	attend national schools.
„	188 or 7.	infant do.
„	1131 or 41.9	private do.
„	1148 or 42.4	Sunday do.*

2702

The character of the instruction, and the rates of charge, in the private schools, were as follows:—

480 children	paid 2d. or 3d. a week	for learning the alphabet at dame schools.
458 „	4d. or 5d.	to read, and sew, if required.
193 „	6d. or 9d.	to read, write, and cast accounts.

By means of the above information we are enabled to compare the state of education among a manufacturing population, with that which exists among an agricultural and a miscellaneous town population, of which specimens are given in the present number of the Journal.†

The collection of facts upon these subjects is of the highest importance and use to those who are occupied in endeavours to improve the physical and intellectual condition of their fellow-men, and it is a matter for rejoicing that the attention of numerous societies and individuals is at present directed to it in several parts of the country.

* When the inquiry was taken there was no Sunday-school connected with the Church of England; those in existence were attached to the meeting-houses of Dissenters.

† See pp. 297, 303, 375.

Statistics of the principal Scientific and Literary Societies in London.
(Communicated by JAMES WHISTIAW, Esq., F.S.S.)

Name of Society.	Date of Institution or Incorporation.	Income.	Number of Ordinary Members.	Honorary, Foreign, and Corresponding Members.	Total Number of Members.
*Royal	1663	£2,601	761	61	822
*Antiquarian	1751	1,927	701	39	740
Society of Arts	1753	1,309	834	39	873
*Linnean	1788	800	578	98	676
*Royal Institution	1800	2,774	816	25	841
*Horticultural	1804	6,500	1350	362	1712
*Medical and Chirurgical	1805	770	400	21	421
*London Institution	1807	2,929	900	1	901
*Geological	1807	1,598	745	86	831
Russell Institution	1808	1,125	700	2	702
*Civil Engineers	1818	1,111	156	195	351
*Astronomical	1820	574	302	43	345
*Royal Society of Literature	1823	785	164	26	190
*Asiatic	1823	907	457	122	579
*Zoological	1825	14,094	3011	164	3175
*Geographical	1830	1,568	651	60	711
Architectural	1831	235	83	19	102
*Institute of British Architects	1834	620	136	79	215
Statistical	1834	850	393	25	418
Entomological	1834	210	200		
Camden	1838	979	980	None.	980

* Those marked with an asterisk have charters.

A further List of Statistical Papers printed by the Houses of Parliament during the present Session of 1839.—(Continued from p. 285.)

HOUSE OF LORDS.

Nos.

- 131 Prisoners—Number confined but not inserted in the Calendars at each Assizes, 1838.
 132 Beer-shops and Public-houses—Opinions as to conduct received by the Constabulary Force Commissioners.
 145 State of Labourers—Diet, Wages; Marriages and Illegitimate Births, at various periods.
 161 Tithe Commutation Act—Apportionments confirmed to June, 1839.
 170 Stone for Houses of Parliament—Report on selection.
 180 Religious Instruction, Scotland—Expense of Commission.
 190 Causes of Correction of Clerks—In Courts of Chester and York, 1829-39.
 211 Bankruptcy Court—Fees received by Clerk of Enrolments, 1838.
 213 Ditto Ditto for Building Fund and Registrar's use, 1836-38.
 233 King William's Town Improvements, Ireland—Report of Board of Public Works.

Nos. 78, 96, 109, 129, 166, 185, 202, 223, correspond with, or are contained in, 239, 268, 129, 247, 255, 401, 463, and 467, respectively, of the Papers printed by the House of Commons.

HOUSE OF COMMONS.

- 224 Bankruptcies—Assets and Dividends of each, previous to 1831.
 226 Legacy Duty—Capital paid on; Wills, &c., charged; Revenue, 1834-38.
 239 Poor Laws—Annual Report of Commissioners, 1838.

- 242 London and Birmingham Railway—Evidence before Select Committee on Bill.
- 246 Prisoners for Trial—Detained over a Session.
- 252 Crown Estate, Orkney—Rents received; Expenditure, 1832-38.
- 255 South Australia—Third Report of Commissioners for Colonization.
- 266 Municipal Charities—Appointment of Trustees; Income, 1837, &c.
- 268 East India—Correspondence relating to Aden.
- 276 Small Debt Courts, Scotland—Courts held; causes heard, 1823-25 and 1835-37.
- 282 School Houses, Scotland—Expenditure of Parliamentary Grants, 1834-38.
- 287 Education, England—Order in Council appointing Committee of Privy Council.
- 290 Jamaica—Correspondence addressed to Colonial Office.
- 304 Ditto Memorial of Planters to ditto.
- 309 Education, England—Estimate of Parliamentary Grant.
- 323 British North American Colonies—Correspondence relating to Indians.
- 326 Commissary Clerk, Edinburgh—Fees exigible by.
- 327 Leith Harbour and Docks—Establishment and Estimate of Expense.
- 328 Dean Forest Mines—First Report of Commissioners.
- 329 Bricks—Duties received in each Excise collection, 1829-38.
- 333 Shipwrecks of Timber Ships—Report of Select Committee.
- 338 (1) Courts of Requests—Officers, Salaries, Suits, Debts sued for and recovered, Costs, Fees, &c., in each court, 1835-37.
- 338 (2) County Courts—ditto ditto.
- 338 (3) Hundred Courts—ditto ditto.
- 342 East India Company—Home Accounts, 1838-39.
- 348 Metropolis Roads—Annual Report of Commissioners, 1838.
- 353 County Cess, Ireland—Amount levied in each county, 1825-33.
- 354 Wheat—Quantities Imported, &c., in each month, 1839.
- 358 County Treasurers' Fee Fund, Ireland—Amount received; Payments therefrom, 1838-39.
- 364 Yeomanry—Force and Expense of each Regiment, 1838.
- 365 Publicans and Beer-sellers—Rental of Houses.
- 370 Glass—Duties and Drawbacks on each kind, 1837-38.
- 371 Malt—Quantities charged with Duty, years ending April, 1838-39.
- 372 Cotton—Imports at each Port from United States, 1837-38.
- 375 King's Inns, Dublin—Receipts and Expenditure, 1832-39.
- 376 Prisons, Scotland—Expenses of building and repairing, &c., 1818-37.
- 378 Lunatics—Number under commissions; Income and Maintenance.
- 379 Ships—Tonnage registered in United Kingdom by old and new system of admeasurement, 1837-38.
- 380 Merchant Seamen—Number of Pensioners; Rate and Amount of Pensions.
- 382 Estimates—Miscellaneous, 1839-40.
- 383 Ditto Ordnance; Supplementary, 1839-40.
- 384 Lighthouses, Ireland—Receipts and Expenditure, 1838.
- 387 (2) County Courts—Report of Select Committee, 1839.
- 390 Factory Inspectors—Returns of Duty performed.
- 391 Lunatic Asylums, Ireland—Patients; Cost of Building; Expenses, &c.
- 397 Upper Canada—Despatches relating to Finances.
- 401 Lower Canada—Revenues and Expenditure, 1833-38.
- 405 East India Company—Revenues applied to Expenses in England, 1837-39.
- 415 Embezzlement of Yarns—Convictions in Forfar, 1837-38.
- 416 Iron and Hardwares—Imports and Exports, 1835-38.
- 417 Sugar—Quantities refined in bond; whither exported, 1839.
- 419 Glass—Quantities consumed and exported; Duties and Drawbacks, 1813-38.
- 428 Crown Teinds, Scotland—Proceedings of Commissioners of Woods and Forests.
- 429 Education, Ireland—Schools aided by National Board, Scholars, &c.
- 430 Public Records Office—Officers, Rules, Expenses.
- 431 Steam Communication with India—Correspondence; Expense; Steam-vessels, &c.
- 432 Commissions, Scotland—Number, Date, Expenses, &c.
- 439 Unstamped Promissory Notes, Ireland—Amount, 1837-38.
- 440 Printed Papers, House of Commons—Expense and Sale.
- 441 Coronation Expenses—Amount of Queen Victoria's.
- 442 Bankruptcy Fiats—Number in each Town, 1838.
- 449 Newspaper Stamps—Number issued to each Newspaper, April to June, 1839.

- 454 Woollen Goods—Duties on Exports to United States ; Correspondence.
- 455 Warwick Gaol—Regulations.
- 456 Estimate—Army ; Supplementary, 1839-40.
- 457 Militia Estimates—Report of Select Committee.
- 459 Justices of the Peace, Lanarkshire—Cases heard ; Expenses, Fines, &c., 1835-38.
- 461 Corporation of London—Building Fund ; Revenues ; Application.
- 463 British Guiana—Employment of Hill Coolies ; Correspondence.
- 467 Slavery in Ceylon—Despatches.
- 468 Caledonian Canal—Report of Commissioners, 1839.
- 469 New Zealand—Treasury Minute on Appointment of Consul.
- 470 Savings' Banks—Purchase of Exchequer Bills on account of, 1836-39.
- 471 Sugar—Quantities refined, exported ; Drawback, 1834-39.
- 478 Debtors—Number in each Prison ; period of detention.
- 479 Estimate—Expenses in Canada, 1839-40.
- 481 Justices of the Peace—Appeals against Decisions, 1834-38.
- 482 Post Office Steam Packets—Hours of Arrival and Departure at Falmouth, 1837-39.
- 483 Poor Law Amendment Act—Order respecting Relief of able-bodied.
- 486 State of Ireland—Report of Select Committee of House of Lords, 1839.
- 487 Warwick Gaol—Number of Prisoners acquitted after confinement, 1834-38.
- 488 Dean Forest Commission—Salaries and Expenses.
- 490 Army Prize Money—Amount unclaimed, refunded, applied, &c., 1809-33.
- 492 Poor Rates—Orders respecting Appointment of paid Collectors.
- 494 Wheat and Oats, Ireland—Average annual Prices, 1837-38.
- 495 Danish Claims—Treasury Minute respecting.
- 516 New Churches—Annual Report of Commissioners.
- 521 Sweets or made Wines—Imports into England from Scotland, &c., 1836-39.
- 522 Private Bills—Introduced ; disposal thereof ; Session 1839.
- 524 Transportation—Despatches from New Zealand.
- 527 Malt—Quantities charged and consumed, 1838-39.
- 529 Herring Fishery—Expenses of Board, 1829-38.
- 530 Joint Stock Banks—Number, Date of Establishment, Partners.
- 531 Public Income and Expenditure—Years ending April, 1836-39.
- 541 Schools, Jamaica—Number established, 1837-39 ; Scholars, &c.
- 547 Commitments and Executions—Average Number, 1829-33 and 1834-38.
- 549 Turkey—Tariff under convention with Great Britain.
- 553 Writs of Ejectment, Ireland—Troops employed to enforce, 1839.
- 554 Slave Vessels—Number brought before Courts of Mixed Commission, 1838-39.
- 559 Armed Associations—Number formed under Circular from Home Office.
- 563 Bills, House of Commons—Number rejected by House of Lords, &c., 1839.
- 564 Hemp, &c.—Quantities purchased for the Use of the Navy, 1833-38.
- 566 Mail Conveyance to United States and West Indies—Contract.
- 575 Spanish Slave Vessels—Proceeds paid into Admiralty Court.
- 578 Loan Fund, Ireland—First Report of Commissioners.
- 580 Emigration Ships—Number engaged by Government ; Freight, Emigrants, Expenses, &c., 1837-39.
- 582 Transportation—Minute and proposed measures.

PRESENTED BY COMMAND OF HER MAJESTY.

Transit Duties, Denmark—Correspondence.
 Slave Trade—Further Papers.
 War in Spain—Further Correspondence.
 Belgium and Netherlands—Treaty.
 Shannon and Erne Junction Canal—Report by Engineer.
 Charities—32nd Report of Commissioners, Part 4.
 Prisons, Scotland—Fourth Report of Inspector.
 Parkhurst Reformatory Prison—Reports, 1839.
 Factories—Half-yearly Reports of Inspectors.
 Duties on Corn—Correspondence with Foreign Powers.
 Turkey and Egypt—Papers, 1833.
 Egypt—Communications, 1838.
 Prussia—Correspondence relating to Commercial Intercourse.

MISCELLANEOUS.

Lunatics.—In June, 1839, the number of persons against whom Commissions of Lunacy were in force was 494. The income of 433, whose fortunes had been ascertained, was 277,991*l.*, averaging 642*l.* each; and the sum allowed for their maintenance was 169,388*l.*, averaging for each 391*l.* 86 have an annual income of less than 100*l.* each, 83 from 100*l.* to 200*l.*, 98 from 200*l.* to 400*l.*, 49 from 400*l.* to 600*l.*, 46 from 600*l.* to 1000*l.*, and 71 have more than 1000*l.*, and averaging 2453*l.* each.

Capital Offences and Executions.—The number of Commitments for Offences which were Capital on the 1st January, 1829, during the five years from 1829 to 1833, was 11,982; the number of Executions, 259, or one Execution to 46 Commitments. The number of Commitments for Capital Offences during the five years from 1834 to 1838, was 11,332, and of Executions, 99, or one Execution to 114 Commitments.

Debtors in Confinement.—The number of Debtors in confinement on the 1st July, 1839, in England and Wales, was 1805; in Scotland, 77; and in Ireland, 924; Total, 2806. Of these 48 were in confinement previous to the year 1830. One has been confined since 1811, 2 since 1812, and 3 since 1816.

Bankruptcies.—The number of Town Fiats issued during the year ended 11th January, 1839, which is the term to which these accounts of the Commissioners of Bankrupts are made up, was 306; and the number of Country Fiats during the same period was 781; Total, 1087.

Sheep's-Wool from Australia.—In 1822 the “growth of the Colony was burned in a single vessel at sea.” In 1837 the quantity imported into the United Kingdom was 7,060,525 lbs., and amounted to one-seventh of the whole imports of that article.

Railways in the United States.—Mr. Stephenson states that there are already completed and in full operation, in the United States, 57 Railways, whose aggregate length exceeds 1600 miles, and 33 others are in progress, which, when completed, will amount to 2800 miles. Besides these, there have been incorporated more than 150 Railway Companies, many of which will very shortly be in action.

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 25th June, 23rd July, 20th August, and 17th September, 1839, and in the corresponding Quarters of the preceding Year.

Quarters ended	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1838.	£.	£.	£.	£.	£.	£.
26th June ...	19,047,000	10,426,000	29,473,000	22,354,000	9,722,000	32,076,000
24th July ...	19,286,000	10,424,000	29,710,000	22,601,000	9,749,000	32,350,000
21st August...	19,481,000	10,298,000	29,779,000	22,747,000	9,746,000	32,493,000
18th Sept. ...	19,665,000	10,040,000	29,705,000	22,846,000	9,615,000	32,461,000
1839.						
25th June....	18,101,000	7,567,000	25,668,000	23,934,000	4,344,000	28,278,000
23rd July ...	18,049,000	7,955,000	26,004,000	24,905,000	3,785,000	28,690,000
20th August...	17,969,000	8,029,000	25,998,000	25,588,000	3,265,000	28,853,000
17th Sept. ...	17,960,000	7,781,000	25,741,000	25,936,000	2,816,000	28,752,000

Aggregate Amount of Notes circulated in England and Wales by Private Banks, and by Joint Stock Banks and their Branches, respectively, in each of the Quarters ended 30th March and 29th June, 1838-39.

Quarters ended.	1838.			1839.		
	Private Banks.	Joint Stock Banks.	Total.	Private Banks.	Joint Stock Banks.	Total.
30th March..	£. 7,005,472	£. 3,921,039	£. 10,926,511	£. 7,642,104	£. 4,617,363	£. 12,259,467
29th June....	7,383,247	4,362,256	11,745,503	7,610,703	4,665,110	12,275,818

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour Imported, Paid Duty, and Remaining in Warehouse, in each of the Months ended 5th July, August, and September, 1839.

Months ended	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
5th July .	285,289	494,195	40,258	54,290	36,196	37,347
„ August	110,560	18,525	131,744	59,718	18,509	66,019
„ Sept. .	235,865	2,197	360,638	33,089	7,249	85,250

Average Prices of Corn per Imperial Quarter, in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week, from 21st June to 20th September, 1839; also the Average Prices of each Month, and of the Quarter ended Midsummer, 1839—(continued from page 286).

DATE.	WHEAT.			WEEKLY AVERAGE.				
	Weekly Average.	Aggregate Average.	Duty on Foreign.	Barley.	Oats.	Rye.	Beans.	Peas.
Weeks ended	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
June 21 .	68 1	69 10	13 8	38 5	27 4	40 2	40 2	39 4
„ 28 .	68 1	69 4	13 8	38 4	27 5	43 8	40 3	39 10
July 5 .	67 10	68 10	16 8	38 1	27 5	47 3	40 5	39 7
„ 12 .	69 0	68 7	16 8	37 4	27 1	37 8	41 0	40 2
„ 19 .	69 2	68 6	16 8	39 4	26 9	45 3	41 0	40 6
„ 26 .	69 8	68 8	16 8	37 8	27 1	45 9	41 0	40 11
August 2 .	71 3	69 2	13 8	38 7	27 3	47 8	40 9	41 8
„ 9 .	72 0	69 10	13 8	37 10	26 9	48 4	40 11	42 3
„ 16 .	72 3	70 6	10 8	38 1	26 11	46 2	40 10	41 6
„ 23 .	71 1	70 11	10 8	38 4	26 9	46 9	41 1	41 1
„ 30 .	71 10	71 4	6 8	37 11	26 8	41 6	42 7	40 7
Sept. 6 .	71 9	71 8	6 8	39 0	26 10	41 9	42 6	42 3
„ 13 .	70 9	71 7	6 8	39 6	26 9	38 10	43 10	42 6
„ 20 .	69 8	71 3	6 8	39 7	26 11	39 0	43 2	42 1
Months.								
June . .	68 8	70 0	..	38 8	26 11	42 3	40 0	39 4
July . .	68 11	68 7	..	38 1	27 1	43 11	40 10	40 3
August .	71 7	70 4	..	38 1	26 10	45 1	41 2	41 5
Quarter ended } Midsummer }	69 11	..	..	38 11	25 8	41 1	38 9	38 6

An Abstract of the Net Produce of the Revenue of Great Britain in each of the Years and Quarters ended 5th July, 1838 and 1839.

	Years ended 5th July,			
	1838.	1839.	Increase.	Decrease.
	£.	£.	£.	£.
Customs	18,790,464	19,606,561	816,097	..
Excise	11,439,296	12,132,971	693,675	..
Stamps	6,506,980	6,560,275	53,295	..
Taxes	3,627,204	3,730,546	103,342	..
Post-Office	1,544,006	1,536,000	..	8,006
Crown Lands	65,000	185,000	120,000	..
Miscellaneous	39,106	94,629	55,523	..
Imprest and other Monies	490,275	486,962	..	3,313
Repayments of Advances.	470,442	716,488	246,046	..
Total Income . . .	42,972,773	45,049,432	2,087,978	11,319

	Quarters ended 5th July,			
	1838.	1839.	Increase.	Decrease.
	£.	£.	£.	£.
Customs	4,769,400	4,871,333	101,933	..
Excise	2,437,112	2,570,311	133,199	..
Stamps	1,692,134	1,647,423	..	44,711
Taxes	1,609,508	1,639,372	29,864	..
Post-Office	381,000	369,000	..	12,000
Crown Lands . . . . .	..	40,000	40,000	..
Miscellaneous	10,390	14,611	4,221	..
Imprest and other Monies	320,758	301,625	..	19,133
Repayments of Advances.	127,660	202,462	74,802	..
Total Income . . .	11,347,962	11,656,137	384,019	75,844

Total Increase on the Year, £2,076,659; total Increase on the Quarter, £308,175.

An Abstract of the Income and Charges of the Consolidated Fund in each of the Quarters ended 5th July, 1838 and 1839.

INCOME.			CHARGE.		
Description.	Quarters ended 5th July,		Description.	Quarters ended 5th July,	
	1838.	1839.		1838.	1839.
	£.	£.		£.	£.
Customs	4,769,400	4,871,333	Permanent Debt . .	8,113,007	8,100,271
Excise	2,456,942	2,559,298	Terminable Annuities	709,104	738,262
Stamps	1,692,134	1,647,422	Interest on Exche- } quer Bills . . . }	19,211	15,162
Taxes	1,609,508	1,639,372	Sinking Fund . . .	..	..
Post Office	381,000	369,000	Civil List	96,400	96,582
Crown Lands . . . . .	..	40,000	Other Charges . . .	521,990	578,382
Miscellaneous	10,761	14,611	Charge for Advances.	78,150	172,400
Imprest and other Monies	320,758	301,625			
Repayments of Advances	127,660	202,462			
Total	11,368,163	11,675,123	Total Charges . .	9,537,862	9,701,069
Cash to pay off Def- } ciency Bills. . . }	..	150,000	Total Surplus . .	1,830,301	2,124,054
Total Income . .	11,368,163	11,825,123	Total	11,368,163	11,825,123

An Analysis of Bankruptcies in England and Wales, showing the Counties and Trades in which the same occurred, during each Month from May to August, 1839.—(In continuation of Account at Vol. II., p. 288.)

COUNTIES.	May.	June.	July.	Aug.	TRADES.	May.	June.	July.	Aug.
Bedford . . .	1	..	..	..	<i>Persons connected with Manufactures.</i>				
Berks . . .	..	2	..	..	Cotton Trade . .	3	2	10	6
Bucks . . .	1	..	..	..	Woolen do. . .	..	6	4	1
Cambridge . .	..	..	1	..	Silk do. . .	1	1	2	..
Chester . . .	..	1	3	2	Linen do. . .	1	..	..	..
Cornwall . . .	..	..	..	1	Tin do. . .	..	..	..	..
Cumberland . .	..	..	..	..	Iron do. . .	..	..	1	..
Derby . . .	1	..	3	..	Iron Wares . . .	1	1	1	3
Devon . . .	..	3	1	4	Building . . .	2	1	5	6
Dorset . . .	..	..	3	..	Miscellaneous . .	11	2	3	4
Durham . . .	2	2	1	3	<i>Agriculture.</i>				
Essex . . .	1	..	..	1	Farmers. . . .	..	1	1	..
Gloucester . .	..	5	4	1	Corn, Hay, and Hop } Dealers, Millers. }	4	1	4	5
Hants . . .	1	2	3	5	Cattle and Wool } Dealers . . . }	1	3	2	1
Hereford . . .	..	1	..	..	Coaches & Horses .	1	..	2	..
Hertford . . .	1	..	..	..	Brewers, Maltsters, } and Distillers . }	4	2	2	1
Huntingdon . .	..	..	..	..	<i>Other.</i>				
Kent . . .	3	..	3	4	Innkeepers and Vic- } tuallars . . . }	5	13	9	11
Lancaster . . .	11	16	49*	31*	Merchants, Ware- } housemen, Agents, }	11	11	23	18
Leicester . . .	..	..	..	..	Brokers, Ship- } owners, & Whole- }				
Lincoln . . .	3	1	1	..	sale Dealers . . . }				
Middlesex . . .	20	24	19	23	Tradesmen, Shop- } keepers, & Retail }	34	34	47	43
Monmouth . . .	1	2	1	1	Dealers . . . }				
Norfolk . . .	2	1	1	..	Miscellaneous . .	..	4	7	5
Northampton .	..	1	1	..					
Northumberland	2	..	1	..					
Nottingham . .	2	..	..	1					
Oxford . . .	..	1	..	..			
Rutland . . .	1	..	..	..		
Salop. . . .	1	..	..	..		
Somerset . . .	1	2	1	3					
Stafford . . .	3	1	3	3					
Suffolk . . .	1	..	..	..		
Surrey . . .	2	5	3	7					
Sussex . . .	1	2	..	2					
Warwick . . .	10	1	7	4					
Westmoreland .	1	..	..	..		
Wilts . . .	3	..	1	..					
Worcester . . .	..	1	..	..			
York . . .	4	8	12	7					
Wales. . . .	..	..	1	2					
Total in 1839	79	82	123	104	Total . . .	79	82	123	104
Total in 1838	98	89	59	65					

* Seven bankrupts in Lancashire (six in July and one in August) were gazetted as shareholders in the Central Bank of Liverpool.

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On the Decline of Popular Instruction in Belgium. By Rawson W. RAWSON, ESQ., Honorary Secretary to the Statistical Society of London.

[Read before the Statistical Society of London, 18th November, 1839.]

THE controversy which is at present going on in England with respect to the subject of the education of the people is fraught with important consequences to the future prosperity of the nation. It is with nations as with individuals. If the bodily powers of a man are alone exercised and matured, without a corresponding development of his mental faculties, there is great danger of his mind being wholly engrossed with sensual ideas, and becoming gradually brutalised. So, if the material progress of a nation outstrip its mental cultivation, if manufactures and commerce, mechanical invention and physical science, riches and luxury make rapid strides, while education and religion, which supply the moral training of the people, creep on but slowly, the result will ultimately prove fatal to the welfare of the community. Experience has shown this to be true. Nation after nation has fallen from the summit of glory in consequence of this neglect. Greece, Rome, and Spain, have each in their turn sunk, gorged with wealth and power, into moral blindness and decrepitude, and have been hurled from the proud station which they once occupied in the scale of nations. It behoves us to profit by such lessons. England has for years been making a remarkable progress in all that relates to its material condition. The application of steam to the purposes of navigation and manufactures has alone effected a revolution, not only in all commercial arrangements and mechanical processes, but in the habits and social state of large classes of the people. It has created among them the necessity for constant movement, constant progress, and incessant exertion. The factory wheel sleeps not, and the steam-vessel goes and returns without delay, and without irregularity. This excitement, or constant state of action, has extended itself, more or less, to all classes. Men engaged in business or labour, and how few in this country are exempt from both, have little or no time for rest or reflection. The merchant and the tradesman are constantly occupied in the hurry of speculation, or the routine of business. The artisan and the labourer toil without intermission to gain a scanty subsistence. In fact, the present characteristic of the nation is *movement*. This may not appear so obvious to Englishmen themselves, and particularly to those who have not witnessed the difference observable in other countries: but it strikes foreigners visiting England with amazement, and is one of the most remarkable points of contrast between this and other European countries. The United States of America resemble England in this respect. There the material energies of

the nation are in full play, and perhaps the outward appearance of industry and activity is even greater than here. But there is one important difference between the two countries. The Americans have recognised the necessity of combining mental improvement with material progress, education with riches, civilisation at home with power abroad. Hence in the present early stage of their national existence, the States have undertaken as a duty the task of providing amply for the instruction of all classes of the people, and education advances there with a step no less rapid than the national wealth and greatness. The case is far otherwise with England. It is true that a great improvement has taken place within the last twenty years with respect to the number of children receiving instruction, but how great must have been the destitution at that time, when, even now, England ranks almost last in the scale of nations with regard to popular instruction, and when, to speak within bounds, two-fifths of the adult part of the nation are wholly without education, and an equal proportion of the rising generation is growing up in the same intellectual deprivation.*

* The following table is given by M. Ducpetiaux in his work on Penitentiary Reform (Brussels, 1838, vol. iii. p. 80). Although the figures cannot be received as absolutely correct, since we know that, as regards England, the Returns made in 1833 are not worthy of confidence, yet there can be no doubt that the contrast between this country and the others preceding it, in which the records of popular instruction are carefully kept, exhibits a difference very unfavourable to the former.

Proportion of Persons attending Schools, to the Total Population.

1. State of Maine (1833)	One in 3
2. „ New Hampshire (1833)	3
3. „ New York (1834)	3·6
4. „ Massachusetts (1833)	4
5. „ Vermont (1831)	4
6. „ New England (1834)	4
7. „ Ohio (1833)	4
8. „ New Jersey	5
9. Canton of Zurich (1832)	5
10. „ Argau (1832)	5·3
11. Kingdom of Saxony (1832)	5·5
12. Bohemia (1832)	5·7
13. Prussia (1831)	6
14. Canton of Vaud (1834)	6
15. Grand Duchy of Baden (1830)	6
16. Province of Drenthe (1835)	6
17. „ Overijssel (1835)	6·2
18. Canton of Neuchâtel (1832)	6·4
19. Friesland (1835)	6·8
20. Württemberg (1830)	7
21. Denmark (1834)	7
22. Norway (1834)	7
23. Scotland (1834)	8
24. Bavaria (1831)	8
25. Holland (1835)	8·3
26. Pennsylvania	9
27. Switzerland—Zurich, Berne, Basle, Schaffhausen, Argau, Vaud, Neuf- châtel, Geneva (1834)	9
28. Austria (1832)	10
29. Belgium (1836)	10
30. England (1833)	11
31. Lombardy (1832)	12·6
32. Ireland (1831)	13·2
33. France (1834)	13·3

We have advanced far beyond most other countries in manufactures, commerce, and the useful arts, but the mental and moral improvement of the people has not kept pace with our material progress. The most enlightened of our statesmen and philosophers have long been convinced of this fact, and have predicted the evils and danger which accompany such a state of things. We already witness some of the consequences in the lamentable outbreaks and destruction of property and life, which have occurred on almost every occasion in which temporary distress has pressed heavily upon the labouring classes, or imaginary grievances have aroused their discontent. We behold it in the machine breaking and incendiarism of 1830; in the riots at Bristol and Nottingham; in the cotton spinners' conspiracy at Glasgow; in the fanaticism of the Kentish peasantry; and lastly, in the revolutionary violence of Chartism. Such evils were long foreseen and predicted. But what steps were taken to avert them, what remedy was applied to the acknowledged disease? The state did not bestir itself; the Church remained inactive: it was left to two societies,—great and influential societies it must be admitted, but still wholly impotent for the object at which they aim,—to raise the nation from its debasement, and to supply a general and adequate system of sound education for the whole people. Such a task was, and ever must be, beyond their power. The question arises, to whom, or to what body does the duty belong? The thoughts of men naturally turn toward the state, or the Government as the representative of the state and its interests. But much prejudice exists against the assumption of this task by the Government. This is not the occasion nor the place to justify or to confute this prejudice, and the only object in alluding to it is to explain the motive for bringing the present paper before the Society. It appears to the author that the existing circumstances of Belgium, and the state of feeling in that country with regard to the subject of national education, have an important bearing upon the question now in agitation in England, and that if the experience of other nations be not entirely without value, it may be useful on the present occasion in determining the course which ought to be adopted in this country.

On the annexation of the Belgian provinces to Holland at the Peace, the Dutch system of national education was introduced into the former country. Committees were appointed in each province for the organization of public instruction; the poor were required to be taught gratuitously; inspectors of schools were nominated; and all teachers were obliged to undergo an examination, and to take out a certificate of qualification before they could enter upon their functions.* The state

* The system of inspection was very complete, and great powers were given to the inspectors, who, on the other hand, were subject to a rigid superintendence. Each province had a provincial commission for primary instruction, which was composed of all the inspectors of the different school districts into which the province was divided. These districts were never so extensive as a Belgian arrondissement, though somewhat larger than a canton. The inspectors were appointed and paid by the state on the nomination of the provincial commission. They resided in their district, within which they were at the head of primary instruction among all classes. Without them, no teacher, public or private, could receive his certificate, or obtain a situation. They were bound to visit each school in their districts, at least twice every year, and to ascertain that the general provisions of the law were observed in them. Thrice in the year they all assembled in the capital of the province, and held a conference which lasted for two or three weeks, and in

advanced funds, and required the communes to contribute for the erection of school-houses; it provided also from the general funds, or from those of the provinces, for the increase of the salaries, and for the pensions of teachers. A great impulse was consequently given to popular instruction. The number of schools and of scholars was increased; the methods of instruction were improved; the institution of a normal school at Lierre, of model schools, and of courses for instruction in the art of teaching in the principal cities; the formation of societies of teachers, and of circulating libraries for their use, with the establishment of public trials among candidates for the situation of teacher, were among the advantages arising from the Dutch system.

The revolution of 1830, by proclaiming the principle of freedom of teaching, suddenly snapped the spring which gave life and motion to this system. It was supposed, or alleged, that the Dutch Government abused its power, for the purpose of propagating Dutch and Protestant principles; that all liberty in matters of education was destroyed; and that religious bodies, who were unwilling to submit to the examination and formalities required from teachers, were prohibited from affording instruction to the people. It is not surprising that the Belgians, being for the most part of a different religious creed from the Dutch, and having little sympathy with their new rulers, should be jealous upon these points. The history of our own country affords too many examples of a similar feeling. The consequence was, that the Government of 1830 abandoned the power, together with the moral influence, exercised by the Dutch Government. The provincial committees for public instruction were too much identified with their originators to be continued without danger. The Government therefore commenced by depriving them of their power of coercion, confining their duties to the superintendence of the schools wholly or in part supported by the public treasury. They were not forbidden to grant diplomas, but the possession of a diploma was no longer required from teachers. Changes also were made among the school-inspectors, and the new officers who were appointed in the place of those removed, were nominated by the provincial states, an elective body, and subject to all the influences consequent upon that mode of constitution. After a while, however, the committees

which each inspector reported upon the state of his district, submitting any questions which required the consideration of the collective body. The provincial commission watched over the conduct of the inspectors, and prepared the annual report required by the Government, before whom they laid any recommendations for the improvement of the system of instruction within their province. At the head of all, under the minister, was a high functionary, the inspector-general of primary instruction. From time to time the government convoked a general assembly of inspectors at the Hague, to which each provincial commission sent a deputy. Thus the system was complete; each inspector directed his district; each provincial commission governed a province, and the general assembly superintended the whole; the inspectors were responsible to the provincial commissions, and the latter to the inspector-general and the minister.

With regard to teachers, every person desirous of entering into that profession was obliged to furnish testimonials as to his moral character, and to undergo an examination before the provincial commission. If found competent, he received a general certificate of capacity; but before he could receive an appointment as a public teacher, he was obliged to undergo a second trial by public competition with other candidates. If he desired to be a private teacher, he was required to obtain the sanction of the municipal authorities of the place at which he intended to reside.

were entirely suppressed by a decree of the Regent, the Government reserving to itself the right of inspecting the schools to which it contributes, in any manner it may prescribe. But of this right it has not hitherto availed itself. Thus at present there is no legislative enactment to regulate primary instruction in Belgium. The authority of the Government extends only to those schools, to the support of which it contributes, while the rest are abandoned to the control of individuals, or of the councils of the communes.

What has been the result of this new system, asks M. Ducpetiaux, from whose recent pamphlet* upon this subject we derive our information. Has it realised the expectations, and fulfilled the intentions of its promoters? M. Ducpetiaux expresses his regret that he cannot refer to official returns to answer this question. For the last nine years the Belgian Government has abstained from publishing any reports upon the condition of the schools in the kingdom, either because it has not succeeded in procuring the necessary information, or because it has not considered it expedient to call the attention of the public, and of the representatives of the people, to a subject which is no longer under their direction, and which may in some degree be said to be beyond their control. This defect is however supplied to a certain extent by the governors, and the permanent deputations of the provincial councils, in whose annual reports the state of public instruction in their respective provinces is succinctly stated. The following details, taken from the reports of last year, will serve to show the present state of each province in this respect, and the grounds upon which M. Ducpetiaux forms his conclusions upon the subject; while the accompanying opinions of the local authorities indicate very clearly the feeling of the Belgians with regard to the necessity of the interference of their Government for the improvement of the present system.

In *Brabant* the number of primary schools on the 1st of January, 1838, was 757, containing 62,206 scholars, viz.

In 8 towns	Schools 200	Scholars 16,087
In the Rural Communes in the Arrondissement of Brussels	,, 238	,, 19,284
In the Rural Communes in the Arrondissement of Louvain	,, 149	,, 12,668
In the Rural Communes in the Arrondissement of Nivelles	,, 170	,, 14,167
Total	<u>757</u>	<u>62,206</u>

The proportion of scholars to the total population is as 1 in 9·6 inhabitants. According to the above census there has been a decrease of 5 schools and 405 scholars in the whole province since the 1st of January, 1836. But the decrease, being confined to the towns and the arrondissement of Brussels, has been still greater in those parts, as there was an increase in the arrondissement of Louvain of 5 schools and 348 scholars, and in that of Nivelles of 275 scholars.

The result of an inquiry into the amount of instruction possessed by the militia of this province enrolled in 1838 exhibits a lamentable picture. Out of 5,873 young men who had completed the age of 18,

* Printed for private circulation, and entitled "Quelques mots sur l'état actuel de l'instruction primaire en Belgique, et sur la nécessité de l'améliorer."

there were 3,105, or 53 in 100, who were wholly destitute of instruction. Among 4,161 in the arrondissements of Brussels and Nivelles, 908, or 22 in 100, could read, write, and calculate; 819, or 20 in 100, could read and write; and 291, or 7 in 100, could only read. The remaining 2,143, or 51 in 100 were uninstructed. In the arrondissement of Louvain only two classes were formed, viz. those who had been to school, amounting to 750, and those who were wholly ignorant, amounting to 962, or 56 in 100. The opinion of the authors of the report upon this province is thus expressed: "Although there has been some progress since 1830, with respect to the number of schools and scholars, yet we cannot be blind to the fact that good methods of instruction are not at present so generally followed as at that period. In order to remedy this it will be necessary to educate competent teachers, and to offer them suitable encouragement."

The Returns for the province of *Antwerp* show that on the 1st February 1838 there were 355 primary schools in the province. At the same date in the preceding year there were 347—the number had therefore slightly increased during the year.

Of the 355 schools, 128 were communal, 54 mixed, and 173 were private. The total number of scholars was 35,371, which was 1,246 more than in 1837.

Independently of this number, there were 3,100 indigent children of both sexes attending the Sunday-schools at Antwerp; 383 in the schools attached to hospitals and other charitable establishments in the same city; 158 in the hospital-schools at Mechlin, and 174 in two boarding-schools and one girls' school in the convent at Hoogstraeten. The model-school for the manufacture of lace, founded at Antwerp by M. Kramp, must also be mentioned.

The two model primary schools, one at Antwerp and the other at Mechlin, are in a satisfactory condition; the first is attended by 237, and the latter by 139 pupils.

The proportion of scholars to the total population in this province may be estimated at 1 in 10 inhabitants.

The number of primary schools in *East Flanders* in 1837 was 775, of which 150 were in the towns, and 625 in the rural communes. The number of scholars in the former was 14,027, and in the latter 46,040, total 60,067, or about 1 in 12·7 of the population. The number of scholars in the model primary school was 160.

The course of instruction in the industrial school at Ghent, which is given in the evening, and only during the winter, was attended during the season of 1837-8 by about 160 persons, chiefly artisans and workmen. This establishment, which has only been four years in existence, has already produced great results. Four of the principal manufacturing establishments in the country are superintended by persons who have followed the course of instruction in this institution, and many others are under the management of its pupils.

The six Sunday-schools at Ghent contain at least 8,000 children of both sexes, and those of Alost, Dendermond, Grammont, St. Nicholas, Audenarde, and Renaix contain 6,962 more. There are 128 of these schools in the rural communes.

In *West Flanders* the number of schools on the 1st of January, 1838, was 585, of which 131 were in the towns, and 454 in the country. The

first were attended by 11,799, and the latter by 35,224, scholars; total, 47,023. Comparing these numbers with the population, it appears that there is 1 school to 1,079 inhabitants, and 1 scholar in 13 inhabitants.

This proportion is far from being the same in all parts of the province. In the town of

Bruges	there is only 1 in 14 inhabitants.
Courtrai	„ 1 56
Menin	„ 1 18
Poperinghe	„ 1 36
Warneton	„ 1 20
Wervicq	„ 1 55

And in the arrondissements of

Thielt	„ 1 15
Roulers	„ 1 69

The authors of the Report state that “it is necessary to guard against entertaining an erroneous notion of the real situation of primary instruction in West Flanders. In a great number of schools this instruction is of little value; the teachers persist in refusing to adopt a reasonable method, and they are generally without good elementary books. The zealous and competent teachers had entertained a hope that the new law respecting primary instruction would have the effect of improving their condition. But the delay which attends the publication of this law causes a sort of discouragement, particularly as the position of a teacher is really painful and precarious. The law should determine the duties which devolve upon the communal authorities with regard to primary instruction. It is absolutely necessary that the teacher should be in some degree sure of a future provision, if he be expected to devote himself with zeal and earnestness to his duties. Perhaps the want which is most sensibly felt in this province is that of a normal school, where instruction may be given to those who are intended for teachers in primary schools. The establishment of such a school would be a real benefit; each commune might then hope to have in future a competent and enlightened person at the head of its school.”

In the province of *Liege*, 36,807 out of 61,293 children, between the ages of 6 and 14, are attending the schools; 24,486, therefore, or two-fifths, remain destitute of instruction. The proportion of scholars to the population is about 1 in 10.

The town of *Liege* has within a few years done much for the improvement of primary instruction. The successive establishment of an industrial school, of a normal school, and of several infant schools, bears testimony to the zeal of the authorities and of the citizens who second their efforts. The rural communes are not, however, in an equally creditable condition. Notwithstanding the funds applied to the augmentation of the salaries of teachers, and to the construction, repairs, and furnishing of school-houses, very unsatisfactory results have been obtained. The authors of the Report from this province state “that these measures have proved inefficacious; they will not serve to rescue primary instruction in the rural districts from the state of languor and decay in which it is at present sunk; in order to revive it, a good law upon education is wanting—a law which will force those communes which can afford it to establish schools, will render assistance to those poor communes which require it, and will, lastly, make the position of

teachers less precarious, and their provision for the future more secure. Such a law would be a benefit to the country : it has long been desired. Why, then, has it not yet been brought forward? Why is it that the legislature delays so long to accomplish that which it ought to consider its first duty?"

In order to remedy in some degree the evil pointed out, the provincial deputation proposes to grant assistance in future only to those teachers who shall have undergone an examination before a commission to be nominated for that purpose in each *arrondissement*, and shall have been declared the most deserving of this favour. It proposes also to establish public trials between the pupils in each *arrondissement*, in the manner already practised in Hainault. Both these propositions have been adopted by the provincial council in its last session.

The returns from the province of *Limburg* for the year 1838 do not state the number of scholars. In the preceding year they amounted to 32,289, or 1 scholar in 10·4 inhabitants. 11,183 francs, or 447*l.*, were divided among 151 teachers. The committees established by a regulation dated the 26th of October, 1836, have examined 80 teachers; of which number only 50 have been found to be possessed of the requisite amount of knowledge, and few of these have passed with distinction. The meetings of teachers, established in August 1837, have been attended by 185 persons, of whom 40 were pupils or under-masters.

In *Namur* the number of scholars on the 1st of January, 1837, was 33,567, of whom 19,105 were boys, and 14,462 were girls. The proportion to the population was 1 in 7. The number of scholars in 1838 cannot be stated, as the necessary information has not yet been transmitted to the provincial authorities.

According to the Report, "the state of primary instruction in this province continues to be satisfactory. The communes rival one another in zeal to furnish decent and wholesome school-rooms, and to procure good teachers. In several the scholars of different sexes are separated, and the girls are placed under the direction of female teachers. The hope which the teachers entertain of obtaining an increase of their salary from the provincial funds makes them redouble their exertions to place their schools on a good footing, and to produce the results which may reasonably be expected from their labours. Those teachers who are wanting in any branch of knowledge are acquiring it in the normal schools. It only remains to be desired that the legislature would soon fill up the blank which exists in our code upon the subject of primary and middling instruction, by supplying the country with a good law upon education."

In *Hainault*, the number of scholars in 1837 amounted to 66,425, or 1 in 9·5 inhabitants. The Report states that in 1838 there had been an increase of schools and scholars, but the number could not be exactly stated. The establishment of public trials between the pupils and between the teachers has generally afforded satisfactory results. The deputation states in its Report, "that, in order to fill up the remaining blanks which primary instruction still presents in this province, efforts have been made to arouse those communes which possess neither schools nor teachers to the fulfilment of the duty which is required of them by justice, morality and prudence, and which we hope will soon be imposed upon them by the law. These efforts, notwithstanding they were

actively prosecuted, have, unfortunately, met hitherto only with barren sympathy. The authorities of the communes, to whom applications were urgently addressed, acknowledge the advantages of popular instruction, and express their desire to forward our projects of improvement; but allege that, weak and isolated, without population, territory, or resources, it is impossible for them at present to support an increase of taxation."

The state of trance in which primary instruction was buried in the province of *Luxemburg* is no longer the same since the wise measures adopted by the provincial council have supplied the means of increasing the funds granted by the state for educational purposes. The communes which have partaken of these, redouble their exertions in order that the indulgence may be continued to them, and others follow their example from the desire to participate in it. The permanent schools, or such as are open throughout the year, are becoming more numerous; public trials are established to procure good teachers; the authorities in the communes are more liberal in their contributions for educational purposes; and many new school-houses have been erected. But, notwithstanding these efforts, the state of primary instruction in this province is far from satisfactory: if there are many schools and many scholars, there is, in general, little instruction; the masters, for the most part, teach only reading and a little writing.

The number of schools in 1836 was 865, and of scholars 45,259. In 1837 there were 831 schools, and 48,733 scholars. This exhibits a slight improvement. Of these schools 257, attended by 23,795 scholars, were permanent, and 574, with 24,938 scholars, were open only during five or six months, or even less.

The proportion of scholars to the population is 1 in 7·5 inhabitants; but more than one-half of the children who are receiving instruction only attend the schools for a few months, or even a few weeks, in the year.

With respect to the teachers, there are 457 out of 831 who receive a payment from some public fund. Of this number—

172 receive	50 francs or less	= £2.
81 ,,	from 50 to 100 fr.	= £2 to £4.
125 ,,	100 to 300 fr.	= £4 to £12.
and only 79 ,,	above 300 fr.	= £12.

If it be true that good teachers are only to be found where they are assured of honourable subsistence, it may safely be said that good teachers are scarce, and that the instruction which the greater part of the children receive amounts to very little. As a further proof of this, it may be mentioned, that out of 253 teachers who were candidates at the trials in the month of May, 1838, in compliance with the resolution of the provincial council, only 103 were found competent to pass.

"However brilliant theories of education may be," says the deputation in its Report, "primary instruction requires a vigorous and systematic impulse, which should be derived from some higher authority than the communal councils. The intervention of the government and of the provincial authorities is absolutely necessary: it is time to arrest the emigration of good teachers; it is time to form new teachers and to render their condition supportable. This may be effected by grants from the state, wisely distributed, by an increase of the sums contributed by the communes, and by the foundation of normal schools."

The result of the foregoing statements is, that the number of scholars in primary schools in Belgium is as follows :—

In Brabant . . .	62,206	or 1 scholar in 9·6 inhabitants.
Antwerp . . .	35,371	„ 10
East Flanders. . .	60,067	„ 12·7
West ditto . . .	47,023	„ 13·
Liege . . .	36,807	„ 10·
Limburg . . .	32,289	„ 10·4
Namur . . .	33,567	„ 7·
Hainault . . .	66,425	„ 9·5
Luxemburg . . .	48,733	„ 7·6
Total . . .	422,488	„ 10

In 1826 there were 353,342 scholars out of a population of 3,771,623, which gave a proportion of 1 to 10·7; therefore, the number of scholars, in proportion to the population, has remained almost stationary during the last 12 years.

This number falls very far short of the number of children of an age to require primary instruction.

The population of Belgium amounted, on the 31st December, 1836, to 4,225,783. In treating of the question of education, these may be divided into four classes. The first consists of children under 2 years of age, who form the eighteenth part of the total population, or 234,766 infants. The second includes children above 2 years and under 6 years of age, who form about a-twelfth of the population, or 352,149. The third contains those from 6 to 15 years old, who comprise about a sixth of the whole, or 704,298. The adults above 15 form the fourth class, and amount to 2,934,570. With the first class we have nothing to do; their education should be entirely conducted by their mothers. The children in the second class, however, should, for the most part, attend infant-schools, for the purpose of preparing for the acquisition of elementary knowledge. These schools are as yet few in number, and exist only in some of the large towns, at Brussels, Ghent, Liege, Verviers, Mons, and Tournay. The number of scholars frequenting them does not exceed 2,000, which is scarcely a-hundredth part of the number which ought to attend them. The children in the third class ought all to attend the primary schools, but from the above statements it will be seen that only 422,488 out of 704,298, or 60 per cent. are attending any school. If it be considered that the above account of scholars includes not only those attending the primary schools, but also those attending the dame-schools, and even the Sunday-schools, and that a considerable portion of this number have not attained the age of 6, or have passed that of 15, we come to the painful but undeniable conclusion, that one-half of the children between 6 and 15, and two-thirds of those between 2 and 15, are wholly destitute of elementary instruction. The number receiving instruction at home are not counted, because they are so few; and because they are fully balanced by the children, who, although borne on the lists of the schools, attend irregularly, or who are reckoned more than once on the books of different kinds of schools.

It has already been shown that more than one-half of the young men of the age of 18, who were present at the drawing of the militia in 1838, could neither read nor write. Similar accounts cannot be furnished for

the other provinces ; but as there is reason to believe that the province of Brabant affords a favourable specimen of the whole country, the total number of adults (according to the same proportion) who are entirely devoid of instruction is 1,555,322. In order to lessen this enormous mass of ignorance, it would be necessary to attach an adult school to each primary school. No exact information can be given of the number of such schools at present in existence, but the inquiries of M. Ducpetiaux only enabled him to discover two, one at Liege, and one recently established at Brussels. The attendance in both amounted to between 300 and 400 persons.

If the number of children and adults who are destitute of instruction be added together, they will amount to 2,185,981 persons, or 55 in 100 of the population, exclusive of children under the age of 2 years.

Such are the figures of M. Ducpetiaux, and they are really startling ; but there is no reason to believe, from the thorough acquaintance which that gentleman has with the subject, and from the means which he possesses of obtaining correct information, that his statements are exaggerated.

With respect to the nature of the instruction given in the schools, the same complaint is made as in this country, that it is little adapted to the wants of the scholars, or to the objects at which it pretends to aim. It is generally confined to the arts of reading and writing, with sometimes a little arithmetic. In many schools the children are merely kept out of mischief while the parents are engaged in labour. The task of intellectual development and moral education is rarely attended to ; the instruction given is purely of a mechanical kind, and is addressed to the head instead of the heart ; it affords the instrument of knowledge without explaining the method of using it to advantage, and often increases the evil which it was intended to remedy.

Another defect of the schools is, that a large portion of them are only open during the winter, and it is at this season that the annual Returns are made up. In 1826, it was found that in the departments containing less than 6,000 inhabitants, more than one-half of the scholars absented themselves entirely during the summer ; and there is every reason to believe that no change has taken place in this respect since that period.

The instruction of girls is still more neglected than that of boys. Out of 421,303 scholars, on the 31st December, 1836, 235,731, or 56 in 100, were boys, and only 185,572, or 44 in 100, were girls. There is scarcely any distinction made in the instruction given to the two sexes ; the children are generally seated together, and receive the same lessons. Under the Dutch government, measures had been taken to encourage the training of good female teachers, but the institutions which were founded, and the projects which were framed, for this purpose were destroyed at the Revolution. The education of girls at present devolves almost entirely upon men, and no means are adopted to instruct them in those manual accomplishments which are indispensable to the female sex.

The number of schools and of scholars has somewhat increased since the Revolution ; but the number of good schools, and of good scholars, has decreased in a corresponding ratio. This double result is principally owing to two causes : first, the unlimited freedom of teaching,

which allows any individual, the ignorant as well as the instructed, to open a school in the same manner as a shop ; and secondly, the want of normal schools to form good teachers. In 1828 the number of teachers who possessed diplomas was 2,145, including 168 females, out of a total number of 4,030. According to the last returns the number of schools was 5,622. Allowing that, notwithstanding the numerous deaths and changes which have necessarily occurred during the last ten years, the number of teachers with diplomas is at present the same as in 1828, and reckoning only one teacher for each school, there will be 3,477 teachers of both sexes, or nearly two-thirds of the whole number whose capacity has not been legally attested.

The institutions supplementary to every good system of education have been generally neglected since the Revolution. The want of infant schools, and the almost total absence of adult and normal schools have already been noticed : the meetings of teachers, the establishment of libraries for their use, the institution of courses of instruction in the art of teaching which were established in the principal towns of the kingdom, have scarcely left traces of their existence in the most favoured localities ; all encouragement to improvement in the methods of teaching may be said to have disappeared ; the societies for elementary instruction founded in Luxemburg, Namur, and Hainault, have abandoned their useful labours ; provision for teachers and their families is left to chance and the caprice of the public ; the sums contributed by the government and the local authorities for public instruction are wholly inadequate for that purpose, and the inspection of the schools, which might easily have been modified and placed upon a more liberal footing, has been wholly abandoned, even in the schools which are maintained or assisted by the government.

Such are the fruits of the change of system in 1830. The abolition of the Dutch code, and the introduction of the principle of non-interference in the education of the people have retarded, instead of advancing, popular instruction. The experiment has been tried for nine years, and the facts above related sufficiently attest its signal failure. Of this the Belgians are themselves convinced ; and the provincial deputations, in their reports, do not attempt to conceal the fact : on the contrary, they call as loudly for the interference of the government, and for the introduction of a law to regulate public instruction, as they formerly exulted in the overthrow of the Dutch code. They have tried both systems, interference and non-interference, and now declare in favour of the former. The draft of a law has long been under the consideration of the Belgian Government, and the declarations of the provincial deputations will probably hasten its introduction. Many of the evils, which they deplore as the fruit of non-interference, exist in this country, sprung from the same causes, and producing the same effects. We are in a state very much resembling Belgium as regards popular instruction. We have always had liberty of teaching and freedom from inspection, but it has not raised us much above the level of that country, and our eyes are now opening to our destitution. The example of Belgium may perhaps be useful to us ; the Belgians, who have had experience of the system which we dread, beg that it may be restored to them ; and the freedom which we are unwilling to relinquish, they have found productive of evil in almost all its consequences.

Report upon the Condition of the Town of Leeds and of its Inhabitants.
By a STATISTICAL COMMITTEE OF THE TOWN COUNCIL. October
1839.*

THE Statistical Committee, having brought their labours to a close, beg to present their Report to the Council; and in laying before that body the interesting and important facts which have come under their notice, they trust that, although the amount of money expended by them has been large, and the period during which the investigation has been made, has been apparently protracted,† yet neither the time nor the money has been mispent, in obtaining correct information on points, in which are involved so many of the various interests, and so much of the happiness of the people, over whom the Council is placed. If a longer period had been allowed, and further means could have been afforded, the inquiry might have been extended more into detail. The Council will observe that tables of subjects are left vacant, which it was originally intended to have carried out, and which could not have failed of being productive of utility, and would have been, in many points of view, highly interesting. As it is, direct attention has been paid only to the prominent features of the condition of the town, viz.—

1. To the surface and sub-condition of the streets; as, for instance, the sewerage, paving, draining, lighting, and cleansing;—to the nuisances which they contain, and particularly to those which are more immediately exposed to public view.

2. To the houses; the size of some, and their accommodation, as compatible with the number of their inhabitants;—their ventilation and cleanliness;—their supply of good water; and the means of carrying off the refuse, together with the general attention paid to local nuisances; the number of houses at various rates of rent.

3. To the population; in its social economy, noticing its most important bearings as to numbers, and their condition, whether married or single, householders or lodgers, owners or only occupiers: number of English, Irish, and other families located, with a view to future statistics on emigration and immigration; widows and widowers, children at different ages; the number working in mills; domestic servants and lodgers: the trades and occupations of all the active population, with their congregation in certain localities: common lodging houses; and benefit societies, &c. In its moral economy—exhibiting the statistics of crime, viz., the number of persons brought up before the Leeds magistrates during the period of nine years, their ages, trades, and occupations; results of summary convictions, and of trials at the sessions: and the number of times the same persons have been brought up during the same year.—Further, with regard to its religious state;—the number of churches and chapels, with their sects, and the amount of accommodation:—to its intellectual state; the number of day schools, and of what order; their general character; the rate of weekly charge; Sunday-schools;—public libraries and other institutions of an intellectual character:—to its physical state; the births, deaths, and marriages

* This report has been partially abridged in order to render it suitable to the present publication.

† The inquiry cost 320*l.*, and occupied eleven months.

in the district of the Registrars ; tables of mortality, showing different influences upon longevity ; the amount of medical and other permanent charity,—of destitution ; of vagrancy ;—the rate and average of wages of different classes of artizans, with the amount of employment throughout the year ; and finally, a directory of every inhabitant householder, showing whether they have lodgers or not ; besides other useful information of various kinds. When the Council determined that a statistical investigation should be made into the condition of the town, the extent to which even the present inquiry has been carried was by no means contemplated. But in attempting to follow out the original view of the Council, many circumstances arose both relating to the town generally, and to the inhabitants, of a nature so important to be made known, and so intimately associated with the general elements of good local government, that the Committee could not but proceed further than they at first contemplated, and they have therefore a somewhat more detailed outline to present, although, as has been previously said, it is by no means so extensive as they could have desired.

These statistical inquiries extend only to the township of Leeds, and for the convenience of reference have been made in wards. It must be borne in mind, however, that in many instances the line of demarcation between wards is the opposite side of some particular street. Thus, for instance, Kirkgate is divided between the Kirkgate and the North Wards. The total population of Kirkgate must therefore be looked for in both wards under the same head. By adhering closely to these divisions, and giving the streets of each ward with their dwellings and population, and the immigrant families, together with the trades, occupations, &c. the state of the town as to its increase or decrease in the aggregate, or in any one particular, may, in future, be distinctly ascertained. Thus, for instance, by giving the number of streets in each ward, the subsequent extension of any ward, and the quality as well as quantity of that extension, may be correctly ascertained. By showing the number and nature of dwellings in each ward, the migration from one ward to another, with its cause, such as the conversion of former residences into mills, warehouses or shops, or any other circumstance producing the enhancement or depreciation in the value of sites, may be noticed. By a reference to the return of owners and occupiers may be observed the number of persons who have a direct interest in the soil, and this must surely be a matter of importance in any population composed extensively of the working classes. By comparing the number of the inhabitants at different periods, we shall arrive at the amount of emigration or immigration, and the sources whence both arise. By inquiring whether their labour is employed at home or not, the increase or diminution of domestic labour will be seen ; an investigation by no means uninteresting in a variable state of manufacture, and which will have just influence on the further outlay of capital in buildings for manufacturing purposes. By a reference to the total population of each street and ward, and to the registries of births, marriages, and deaths of the same, either in single streets or in the aggregate,—the social, domestic, and physical condition of each ward or street may be satisfactorily developed, and the proper remedies, where remedies are needed, may be ascertained and applied. In this manner all the questions in the following tables have generally been designed and worked out, not more with a desire of

having present correct data, on which to ground useful calculations, than with a view to future comparisons.

In reporting the superficial state of the wards, it must be borne in mind that the inquiry has been extended over the period from November 1838 to October 1839; and that during the collection of the evidence now presented to the Council, considerable improvements have been effected, and some alterations have taken place, either owing to a knowledge of the fact, that an inquiry had been instituted by the Council, or from the attention of the owners of property having been personally directed to the state of particular localities. But, generally speaking, their average condition remains the same, and, it seems to your Committee, must continue so, until some steps have been taken to enforce better regulations for sewerage, paving, and draining the streets, and for more effectually cleansing, ventilating, and regulating the dwellings of the inhabitants in large towns, both for their comfort, the prevention of disease, and for facilitating improvements in the moral and social condition of those who at present, from circumstances over which they have no control, are neglected and forgotten. The difference which an enactment for this purpose would occasion in the general bearing and character of the inhabitants themselves is so apparent, that it seems a matter of surprise that, in a pecuniary point of view, the better regulation of the streets in which the cottagers reside is not an object of more solicitude to the landlord. The tenants are not to blame, but they have no protection from the cupidity of the landlord, neither have the public, who, daily passing and repassing these filthy streets, are exposed to the sight of the most offensive nuisances. The condition of the streets of Leeds, however, and especially of those parts of the town in which the working classes congregate and reside, is a subject of vast importance in every point of view, but particularly with regard to the general health of the inhabitants. In another part of the Report the attention of the Council is especially directed to this consideration, and the Committee earnestly hope that something will be speedily done to remove this great grievance. During the inquiry it was thought by the Committee that the powers vested in the Improvement Commissioners, under their Improvement Act, might have been beneficially exercised in the removal of nuisances of a pressing nature; and the Chairman of the Committee waited on that body for the purpose of inquiring how far such an object could be effected: but the general term nuisance is so indefinite in point of law, and the means of obtaining information are so uncertain, that no immediate good resulted from the communication. It seems, however, worthy of consideration whether streets, which have been long used by the public, have not become highways, and are liable to the Acts of Parliament under which highways are regulated: otherwise your Committee are not aware of any remedy; but they hope that it will form a subject of grave inquiry in the future deliberations of the town-council, based on the statistical facts now presented.

The North Ward* is reported to contain 80 streets, the condition of which is as follows: 37 good, 14 middling, 15 bad, and 14 very bad. By the term "good" is meant the state of the surface,

* Formed by the area within the boundary of the east side of Vicar Lane and North Street, the Leylands, part of York Street, and the north side of Kirkgate,

as the same term would be applied to any part of Briggate. The word "middling" is generally intended to apply to streets that are paved, speaking as to quantity, and which are now and then swept by the occupiers of the houses. "Bad" is a term applied to half paved streets, which are never swept; and "very bad" to the broken and undulating surfaces of those which are at the same moment a street, a pond, and a midden, never swept, never cleaned, nor drained, all absorbent, in the fullest sense in which each term is applied. The condition of some of the streets and dwellings in this ward is proverbial.* They are stated to be, all more or less, deficient in sewerage, unpaved, full of holes, with deep channels formed by the rain intersecting the roads and annoying the passengers; some ill-lighted, and some without lamps; with cellars sometimes so dangerously exposed, that passengers are liable to frequent accidents; and sometimes rendered untenable by the overflowing of sewers and other more offensive drains; with ash-holes, &c. exposed to public view, and never emptied, or being wholly wanting, as is frequently the case, the refuse is accumulated in cellars, thrown into the streets, or piled against the walls.†

There are 37 houses of ill fame in this ward, three of which are dens of the most infamous description. In the Boot and Shoe Yard there are 34 houses occupied by 43 tenants, consisting of 79 heads of families, viz. 174 males and 166 females, making a total of 340 inhabitants, or ten to every house. The number of rooms in these houses is about 57; there are therefore on an average six persons to each room. The annual rental of this property is 214*l*. There are only three out-offices, from one of which, during the period of the cholera, 75 cart-loads of soil were removed by order of the Commissioners, and which is reported not to have been cleaned out since. There is no water within a quarter of a mile. Very few of the inhabitants possess vessels in which to hold or fetch water. Those who have the means of fetching it can get it for about 2*d*. a week, but many of them pay from 4*d*. to 7*d*., and in some cases as much as 2*s*.

The North East Ward contains 93 streets, of the following character; 27 good, 19 middling, 31 bad, and 16 very bad. The bad are very numerous, and consist chiefly of streets half middling and the other half very bad, having dangerous excavations, cellar-steps unprotected, bad drainage, little or no sewerage; here and there pieces of stagnant water; ash-holes exposed; out-offices without doors or seats; very unsafe and filthy dark passages, and flights of steps forming thoroughfares from one street to another, worn out and exceedingly dangerous. There are several horrible places in this ward which are utterly impassable for filth of the most offensive description. In Mabgate, a considerable distance alongside the Beck is unprotected, and not long since a child was drowned there. The burial-ground belonging to the Primitive Methodists, but now thrown open, is made the receptacle of every species of nuisance.

The East Ward is described as containing 122 streets, of which 35 are good, 17 middling, 28 bad, and 42 very bad. Many of the streets designated good are worthy of imitation, for instance, those belonging

* The Leylands, Skinner Lane, George's Street, Union Street, Ebenezer Street, Goulden's Buildings, Harper Street, Wellington Yard, and Boot and Shoe Yard.

† A particular description of several of these streets in this and the other wards is inserted in the Report, but omitted here, as possessing chiefly a local interest.

to Mr. Croisdale, Ellerby Lane, and some others; but a large number are in as bad a state as those previously described. Many Irish families live in some parts of this ward, and keep pigs in the cellars which they themselves inhabit.

The South Ward is described as having 23 streets, 10 good, 4 middling, 6 bad, and 3 very bad.

Kirkgate Ward, containing 18 streets, is reported upon the whole to be in a good state.

The Mill Hill Ward contains 48 streets; 35 are good, 5 middling, 4 bad, and 4 very bad.

The West Ward contains 125 streets; 53 good, 26 middling, 34 bad, and 12 very bad.

The North West Ward contains 77 streets; 32 are good, 23 middling, 17 bad, and 5 very bad.

In this cursory description of the superficial state of the wards, more credit is allowed to the heading "good," than, in common fairness, ought to be; for although 244 streets are said to be good, the Council will remember that, in these observations, the definition of the word good is only relative; of those 244 streets only about 70 belong to the town, and are cleaned by the scavengers, and these are all that should be called good; the remainder, if they deserve the name, are indebted to accidental circumstances for their present condition. Many of them are paved like those of the town, and generally they have either thorough vents, or, by reason of their locality, have fall enough to be cleaned whenever there is sufficient rain to effect that purpose. The condition of all those where the population is exceedingly dense, where the traffic necessarily is great, and where there is hardly sufficient fall for sewerage, even if it were attempted, may be easily imagined.

The attention of the Council is next directed to the following points for consideration in this part of the survey.

1. The want of out-offices for the accommodation of the inhabitants, and the necessity of some surveillance over those which may be said to be public, for the purpose of maintaining the general health, and to free the inhabitants from dangers of an accidental nature.

2. The offensive practice which prevails, of allowing the conveniences outside of public houses to remain exposed to public view.

3. The intersection of the public streets with clothes-lines.

4. The cellars and steps which are unprotected in public causeways.

5. The state of the sewerage, and the consequences which ensue from a general want of it.

1. The want of out-offices for the ordinary accommodation of the tenants is a matter of importance, first as regards the actual absence or insufficiency of them, and secondly their unserviceable condition, by which the greatest nuisances are committed in the neighbourhood of other property, and before the eye of the public. Both these questions refer to the health, not only of the neighbourhood, but of the whole community. It seems to your committee that some of the property where the working classes reside has been laid out without any reference whatever to the erecting of out-offices, and a great part of the remainder certainly without relation to numbers. Thus, for instance, for three streets in the Bank containing 100 dwellings, and a population

of 452 persons, there are but two small offices, neither of which is fit for use; one street being wholly destitute of such provision. And again, in Lorry Bank, in the North-west ward, there are 30 houses containing 50 inhabitants with only one office. These are given as instances of facts which might be multiplied in every ward, and almost in every locality, amongst the humbler classes. The inhabitants complain, as well they may, not only of the little regard paid to the comforts, but also to the common decencies of life, which one would think should form a consideration with owners of property; and the consequence is that the streets become the receptacle for ashes, filth, and refuse of every description, until they become far above their original level, and offensive beyond measure at all times, and during all seasons. This is not an overstrained description, for in one of these streets where there is no drainage, an expiring Irishwoman was found in a cellar-dwelling surrounded by her family and a number of pigs, the filth of which latter it would be necessary to remove into the street by the hand. But where these offices are built, the same results would accrue if no attention was paid to their cleanliness. These places in a poor neighbourhood are, in truth, public conveniences, for being in most cases built under an archway in the thoroughfares which are left for the passage of the tenants from one street to another, they are used by all neighbours or passengers. Uncleansed, because it is nobody's business, and every body's perquisite, they become offensive in the highest degree. But if a surveillance of such a nature as would remedy this glaring evil, so as to compel the building of offices where there are none, and the cleansing of those that exist, might be considered an interference of an unwarrantable nature, surely it is not too much to demand that the safety of the public, both from accidental death and from death by disease, should be cared for, of both of which instances are quoted in the Report.

2. The nuisance arising from public conveniences which do not conceal the person cannot have escaped the attention of the most casual observer. If they are to be allowed at all in the public streets, their formation so as to conceal the person should be rigidly enforced. It may be said that every inn has not accommodation for such buildings, and that the commissioners will not permit them to be erected on the public land. This may be true, but the argument is not a valid excuse for exhibitions which are highly offensive both to public morals and to the public eye, or for any person to take a licence to sell ale, and forthwith to place a flag edgeway against the front wall of his house, for the accommodation of his customers. The number of these nuisances is 292, of which 190 front the public road, and only 19 are made so as to conceal the person.

3. The intersection of the streets with clothes-lines is an anomaly in street regulations. In the township of Leeds, out of the total number of 586 streets, 276, or nearly one-half, are weekly so full of lines and linen as to be impassable for horses and carriages, and almost for foot-passengers. In several of the streets the washed linen of the inhabitants is hung out to dry from the windows of the second story, and is thus placed entirely out of the way. Either this should be made general, or some distinct place should be provided for the accommodation of the working classes for this important domestic purpose. The

same answer is returned here as has been previously given; viz., that these streets are private property, and that other persons than those who have the right of use have no business to pass and re-pass them; and whatever nuisances exist, the passenger, who is merely so by sufferance, has no right to interfere. But the reply to this is, that by public usage these streets become highways, and therefore no such interruptions of them ought to be allowed. Many accidents have occurred from this usage, and many others will continue to occur, as long as such a practice is permitted to remain in force.

4. In several of the reports on the wards individually, the cellar openings and steps in the causeways have been noticed. These are a great inconvenience, and attended with considerable danger in those parts of the town which are altogether without lamps or but partially lighted. Steps in the causeways, in many cases rising a foot in height, and opening to cellars and window frontages, are not at all uncommon. During the course of these inquiries, five persons have broken their legs from this cause alone.

5. The last point to which the attention of the Council is directed under the head of streets is the state of the sewerage; and, although considerable difficulty has arisen in the inquiry, as to which streets are furnished with sewers, and a great deal of doubtful information has been rejected, yet much valuable matter has been obtained, showing that the sewerage and drainage of the township of Leeds is exceedingly deficient, and altogether inapplicable to the wants of so large a population. The Mill-Hill, Kirkgate, and part of the North wards, are all, generally speaking, furnished with sewers in those streets that belong to the town, and many of the others, which do not belong to it, have small sewers emptying themselves into others which are larger. But it may be readily imagined that proprietors of land, in laying out private property for building ground in any particular locality, and sewerage it for their own advantage, never contemplated the appropriation of that sewer to the contributions of adjoining property.

It would seem that the Sheepscar Beck, in the whole of its course, was originally intended not only to be available for the important purposes of manufacture, but was so situated as to receive and carry off the water from the higher land, on its eastern and western sides; and that there could not possibly have arisen any difficulty in the formation of excellent sewers from Camp Lane, Brunswick Street, and the whole range of streets between the Beck End, the eastern side of North Street, and Vicar Lane. What, however, is the fact? Instead of parallel sewers, discharging themselves into the Beck, with all the advantage of their fall, they pour their contents into the sewers in North Street, Regent Street, and Bridge Street, and ultimately into the Beck, near Lady Bridge. Thus the sewer in Regent Street runs along its whole line parallel with the Beck, then turns up to the west at Moscow Street, and part of Templar Street, where it unites with the Bridge Street sewer, and subsequently discharges itself into the Beck at Lady Bridge. Unless, therefore, the sewer in Bridge Street was originally made sufficiently capacious to receive these immense contributions, it is evident that the part of the district, which has the least fall, has not only the worst chance of discharging its contents, but there is considerable danger

of its being engorged with back water from other neighbourhoods, which must find its vent somewhere else. It was thus in the spring of 1839, during some days of uninterrupted wet weather, that this sewer in Regent Street was engorged, and emptied itself into the cellar dwellings of that densely populated and lowly situated neighbourhood, producing all the results of malaria, and rendering the health and even the lives of the inhabitants precarious. So fatal were the effects, that the registrar of that district made a report, that during the period in question there were in that neighbourhood two births to three deaths, whilst in all the other districts there were three births to two deaths. Other populous districts are shown in the report to be wholly without sewers, or so inadequately provided as to derive no advantage from them. In some rows of houses the cellar dwellings are seldom dry: in another district several streets are described as being "in that state in which a frequented road leading over a field to a brick garth would be in wet weather." The inhabitants have from time to time vainly attempted to repair these streets with shovelfull of ashes; and soil and refuse water stand in every hole where a lodgement can be made, there to remain until absorbed by wind or sun—"a perpetual nuisance to the eye, and a perpetual fever to the whole body."

This question will naturally arise in the minds of the Council—If there be neither sewerage, drainage, nor out-offices, how can the inhabitants of the parts of the town accommodate themselves, and how do they get rid of their refuse? The answer is, that in a great measure the adult population use the offices of their respective places of employment, and that all the refuse of their dwellings is thrown into the street, where pools of water accumulate and stagnate, exhaling pestilential effluvia over the whole neighbourhood, or sump-holes are used for absorbing it; a less disgusting mode of riddance, but more subtle and pernicious in its effects, because less suspected, and therefore less guarded against. Why is it that parts of the North-east and North-west wards are germs of fever and hot-beds of disease? Because sump-holes, stagnant water, and inundated or damp cellars everywhere abound in them. Take, for instance, some of the streets on the York road, where every house has a sump-hole under its cellars, full of deposit, long since stagnant. Take the residences by Lady Bridge through all its course, where there are cellar dwellings, in which the inhabitants have awakened in the night, and found their beds literally floating in their apartments. Take parts of the North-east and North wards, the cellars of which are humid and dark, with undrained land, and re-gurgitating sewers, and you will have the answer. It was early during these inquiries that a deputation of women waited upon one of your committee, hearing that such an inquiry as this had been determined upon, to beg an immediate remedy for a stagnant pool in Harper Street, which was ultimately removed. And now in calmly looking at the surface and sub-condition of the streets in this important and populous town, and in comparing one fact with another, let the members of the Council ask each other,—1st, Whether these classes, who form a great part of its aggregate population, have their fair share of public comfort and convenience. 2d. Whether there can be any reasonable ground for disbelieving the report of the registrar-general, which proves Leeds to be a most unhealthy location.

The annexed table, No. 1., gives the condition of the wards at one view ; as far as the committee have been able to ascertain the facts, and by one or two comparisons the Council will be led to form their own estimates on these questions. It will be seen that the population of the North-east ward is 16,269 ; and that 15,399 consist of the working classes. There are in the ward 93 streets ; of which 27 are described as good ; 4 are paved by the town ; 3 are wholly, and 12 partly, sewered ; 38 are without sewers, and 40 have not been ascertained. The number of dwellings is 3,813, and the rate to be collected upon property within the ward is 1,491*l.* 18*s.* Let it be observed, however, that though 27 streets are denominated good, only 4 of these are paved by the town ; and, therefore, in reality only 4 are regularly attended to by the surveyor and scavenger. If then the remaining "good" be added to the middling, since all which do not belong to the town are never wholly swept or cleaned, and are rarely, if ever, repaired, the description of the surface of the whole ward will be complete. The sewerage may also be judged of in like manner ; 40 streets have not been ascertained, because in most instances no one could inform the querist whether they had sewers or not ; a presumptive proof that they had none ; on which supposition 78 out of 93 are totally without sewers. In comparing this with the Mill Hill ward, which contains a population of 5,167, including 1,566 persons of the working classes, a total number of 48 streets, of which 13 only are bad, very bad, and middling, 19 are paved by the town, and 19 have public sewers—we see a very considerable difference ; and though it is true that the amount of rate to be collected is very considerably above that from the North-east ward, yet the number of dwellings and population is proportionately so much greater in the latter, that population ought to bear comparison with property, and have a fair share of the benefit as it has of the burden. All property rated to the poor-rate is liable to be rated to the highways, and a great quantity of cottage property is also included in the improvement-rate. The cottagers, therefore, contribute their legal quota to the repair of the highways of the township. But if we take the mass of cottagers, who are included in the highway rate, merely in the North, North-east and East wards, we shall find that they alone contribute a conjoined rate of 4,701*l.* 15*s.* 8*d.*, for which they have only 19 streets paved by the town out of an aggregate number of 295 ; whilst in Mill Hill, out of 48 streets, 19 have this advantage. The fair inference is, that in a great measure the cottagers are rated as a part, and for the benefit of the whole community, but are mulcted of that proportion which ought to carry clean pavement to their own doors, instead of the privilege of having it here and there only in their necessary progress through the town to and from their occupation. It matters not, that because for a warehouse the occupier pays a larger amount of rate, he has a primary right to clean and good streets only in the front of his own dwelling ; he has also a right to them in those parts of the town to which his avocations, his inclination or his duty, may lead him ; and the small rate-payer who furnishes his quota as demanded, in the ratio of his occupancy, has an equal right to all the comforts and advantages enjoyed by his more opulent neighbour. Let it not, however, be charged upon all the landlords alike, that their freeholds are a bye-word and reproach for this

want of attention to the surface and sub-condition of the soil. In many instances, when the property of a street is in many hands, one half of them or more have originally completed their respective parts, as regards paving and sewerage: but the cupidity, obstinacy, or poverty, or all combined, of other owners, or even of a single one, has prevented the improvement of the whole. One thing is certain, that the greater part of the town is in a most filthy condition, which demands an immediate remedy; a remedy which does not seem attainable under any local Act now existing; but calls for an especial enactment, which is doubtless required not only for Leeds, but, more or less, for every town in the empire.

TABLE I.—Number of Streets in each Ward; their general Condition, as compared with the Population of the Ward, and its Rate to the Highway.

WARDS.	Population of the Wards.	Population of the Working Classes.	STREETS.													Total Number of Dwellings.	Amount of Poor Rate to be collected on Property.	
			Total Number.	Condition as to Surface.				Paved by the Town.	Condition as to Sewerage.									
				Good.	Middling.	Bad.	Very Bad.		Wholly Sewered.		Partly Sewered.	Not Sewered.	Not ascertained.					
									Private Sewers.	Public Sewers.								
North .	12,506	9,450	80	37	14	15	14	8	2	8	8	11	51	2,794	£.	s. d.		
N. East .	16,269	15,399	93	27	19	31	16	4	..	3	12	38	40	3,813	1,705	0 8		
East. .	14,271	13,261	122	35	17	28	42	..	..	3	13	69	37	3,461	1,491	18 0
South .	5,630	4,243	23	10	4	6	3	4	..	..	1	13	9	1,266	1,504	17 8
Kirkgate	3,138	1,233	18	15	1	2	0	7	..	4	5	6	3	645	1,330	13 8		
Mill Hill	5,167	1,566	48	35	5	4	4	19	..	19	2	4	23	984	1,659	17 8		
West .	15,483	9,468	125	53	26	34	12	9	..	1	3	8	113	3,305	3,890	11 8		
N. West	9,636	6,592	77	32	23	17	5	11	..	0	3	10	64	2,441	3,457	8 4		
Total .	82,120	61,212	586	244	109	137	96	68	2	38	47	159	340	18,379	16,672	1 4		

Houses.

The size of an ordinary cottage room in Leeds is 5 yards square, and about 4 yards in height. Few comparatively exceed this size. Each house consists generally of a cellar, a sitting-room, and a chamber. This small size of the houses may perhaps be one of the causes of the tendency to consumption, which in Leeds is very prevalent in proportion to other diseases, and to a much greater extent than is generally imagined; for there can be no doubt that the vitiated atmosphere of sleeping rooms of so small a size, crammed with human beings as many of them are, both during the day and night, predisposes the system to diseases of such a character.

The subjoined table shows more clearly what may be said to be the average size of cottages for individual families; and also of those which are the common lodging houses of vagrants and poor travellers, with the space for breathing room, and the number of inmates for whom accommodation is provided. Let the fact be marked, that in some instances there are from 5 to 6 persons in each bed; that there are generally

2 or 3; and, frequently, without separation of the sexes, or consideration as to age; brother and sister up to adolescence sleeping commonly in the same room, and not unfrequently in the same bed: and it is to be feared, as has been often stated to be the case, that crime to an incalculable extent takes its rise from this custom, and spreads thence its influence abroad. But imagining the atmosphere of these dwellings, where 6 persons have been partly living by day, and wholly sleeping by night, whose entire space does not exceed 600 cubic feet: where every office has to be performed; pent up in a confined yard, through which the free air seldom, if ever, circulates; can it be a matter of wonder that parts of Leeds are exceedingly unhealthy, or that squalid objects of humanity present themselves often to our view? If to this be added, in the case of young persons working in mills, the transition from heated and foul air to the cold and humid atmosphere of a December morning at 5½ o'clock; and then again to the temperature of a room perhaps at 90°, and back again to the open air, with all the other modes by which the thread of life is weakened, we may be surprised rather that the ratio of life should be so great in manufacturing towns as it is, and particularly as compared with congregations not subjected to these violent changes.

TABLE II.—Size and Accommodation of Cottage Houses.

Yards in Kirkgate.	House.	Rooms in each House.				Inmates.	
		Day Rooms.	Sleeping Rooms.	Size in Cubic Feet.	Number of Beds.	Total Number.	Number to a Bed.
Wellington Yard . . .	1	1	3	1200	6	13	2
„ . . .	1	1	1	1000	2	8	4
„ . . .	1	1	1	800	..	11	..
„ . . .	1	1	1	1000	..	8	..
„ . . .	1	1	1	1000	..	9	..
„ . . .	1	1	1	1000	..	5	..
Dixon's Buildings . . .	1	0	1	700	1	5	5
„ . . .	1	..	1	600	1	6	6
„ . . .	1	..	1	900	2	8	4
Cherry Tree Yard . . .	1	..	1	1800	..	12	..
Old Post Office Yard . . .	1	..	4	1400	6	27	4½
„ . . .	1	..	2	1200	2	10	5
„ . . .	1	..	12	1200	16	39	2½
„ . . .	1	..	1	600	..	4	..
Harper's Yard . . .	1	1	1	1000	..	5	..
„ Street . . .	1	1	2	1000	2	10	5
„ „ . . .	1	1	1	800	..	9	..
„ „ . . .	1	1	2	1000	..	15	..

Generally speaking, ventilation is not well attended to, but the ordinary appearance of the dwellings is cleanly and comfortable. Exceptions to this rule are to be found in the houses of the Irish handloom weavers, which, none of the cleanest at best, are in many instances rendered still more deplorable by the intermixture of beds, chairs, looms, and all manner of utensils, diminishing still further the cubic feet of air which they have to breathe at night, vitiated as it has been by long days

of incessant labour, and pent up in a situation almost beyond the possibility of circulation. In addition to this, the supply of good water is exceedingly deficient in many parts of the town, and has to be bought and carried a considerable distance, at great expense both of labour and money. The main sources of supply are the waterworks, a few public pumps, and the water-carts, all of which furnish a quantity much too scanty for the demand. It has been stated that water costs some of the inhabitants in the Boot and Shoe Yard as much as 2s. a-week. This must, however, be a rare case, and arises in a great measure from carriage and quantity. The means of carrying off refuse water has been referred to under the head of "Sewers."

An attempt has been made, and your committee believes with success, to ascertain accurately what number of dwellings there are in the township of Leeds, at the respective rentals of 5*l.* and under, between 5*l.* and 10*l.*, 10*l.* and 20*l.*, and above 20*l.*, with several objects in view, but particularly to ascertain the probable number of the working classes, the amount of which it was, for many reasons, important to obtain. The subjoined table gives the information obtained under this head.

TABLE III.—Number and Rents of Houses.

Wards.	Number of Occupied Dwellings.	Number of Empty Dwellings.	Total Number of Dwellings.	Rents.				Cellar Dwellings, not accounted for in previous Columns.	Common Lodging Houses.	
				£5 and under.	Above £5 and under £10.	£10 to £20.	Above £20.		Number	Number of Beds
North. .	2,734	60	2,794	540	1,560	524	110	100	20	56
N. East .	3,731	82	3,813	1,546	1,876	264	45	187	12	70
East . .	3,246	115	3,361	1,662	1,285	226	73	145	6	25
South. .	1,214	22	1,236	300	643	194	77	25	..	..
Mill Hill	976	8	984	102	246	181	444	11	..	..
Kirkgate	641	4	645	82	192	130	237	10	3	5
West . .	3,252	53	3,305	340	1,764	778	370	74	..	..
N. West .	2,045	96	2,141	700	765	340	240	3	..	..
Total .	17,839	440	18,279	5,272	8,331	2,640	1,596	555	41	156

From these occupied dwellings the population has been taken; and by reference to their rental the numbers of the working classes may be obtained. Thus, for instance, supposing the total population of the township of Leeds to be 82,120, and the number of inhabited houses 17,839, the one divided by the other will give the average number of inhabitants in each family, viz., a fraction more than $4\frac{1}{2}$; and if all the houses under 10*l.* rent are taken, and multiplied by $4\frac{1}{2}$, we have the number of those who may fairly be called the working classes, 10*l.* being about the highest rental of any cottage house in the township. Thus, 13,603 is the number of houses under the annual rent of 10*l.*, which, multiplied by $4\frac{1}{2}$, gives the number of the working classes 61,212. From these data many interesting results may be obtained, of which some are to be found in the following pages under the head of "Population."

The cost and value of house property, exclusive of mills, warehouses,

and other buildings, in the township of Leeds, may be thus estimated :— the total number of dwellings is 18,279, and the number of houses under the rent of 10*l.* is 13,603, leaving 4,676 houses whose annual rental exceeds 10*l.*

Supposing the average cost of a good cottage house to be 75*l.*, including land, then the number of houses under 10*l.*, multiplied by 75, will give the original cost of their erection, viz., 1,020,225*l.*; and if the remainder of the dwellings be averaged each to have cost 400*l.*, the number multiplied by that sum would give 1,870,400*l.*, making a total of 2,890,625*l.* If the mean annual rental of these cottages be 7*l.*, deducting leakages and repairs, then their yearly value to the proprietors is 95,221*l.*; and if those above 10*l.* be averaged at 25*l.*, their value is 116,900*l.* per annum, making a total revenue of 212,121*l.*

By applying these data to wards, the nominal value of the property in each, and the cause of its depreciation or enhancement, may be readily ascertained; but this is an inquiry foreign to this report.

Population.

It will be seen by the annexed table that the total population of Leeds alone is 82,120, of whom 27,299 are children under 13 years of age, 9,947 are young persons between 13 and 21, and 44,874 form the adult population of the whole number. Generally speaking, the population of a country is considered to be passive until 15 years of age; but in England, with its manufactures, mines, and other species of employment for labour, it is passive only until 9 years, a period at which the law now sanctions the employment of children for a limited number of hours during the day, reserving, however, the name of children until 13 years of age, when they are designated young persons. For this reason it was thought desirable by your committee to retain these distinctions. The passive population of Leeds is, therefore, 20,445, or one-fourth of the whole; and the productive number is 61,675. Of these latter 17,839 are inhabitant householders; amongst whom are 13,881 married couples, 999 single persons, and 2,990 widows or widowers;* 4,283 are lodgers, and 4,509 are domestic servants.

The Irish immigrant families amount to 996, and others from various places to 70, and, as may be seen, are collected chiefly in the North, North-east, and East wards, especially the latter, where they carry on handloom weaving to a considerable extent.

It is to be hoped that the information contained in some of the tables now presented will give rise to measures which will afford permanent comfort to a great part of the population, which during a lengthened period has been entirely overlooked. Some of the others will doubtless suggest a variety of inquiries of a useful character, when returns of a similar nature are again made. For instance, the proportion of married persons to the population will show whether the latter is stationary, or its proportionate increase or decrease.* The householders will indicate the increase or decrease of persons having interest in the town more directly than a mere account of the number of occupiers.

* Deducting from the number of householders 31 widows, who reside two in a house in the almshouses, each of which has only been counted as a single dwelling.

TABLE IV.—Population of the Township of Leeds.

Wards.	DWELLINGS.							COUNTRY.		
	Occupied by		Occupied by			Widows.	Widowers.	English.	Irish.	Others.
	Owners.	Tenants.	Married.	Single Persons.						
				Male.	Female.					
North . .	90	2,644	2,134	67	96	341	96	2,480	236	18
N. East . .	106	3,625	2,980	53	80	477	141	3,546	167	18
East . . .	56	3,190	2,629	49	61	415	92	2,725	512	9
South . . .	21	1,193	897	50	23	182	62	1,207	5	2
Mill Hill.	54	922	695	76	40	120	45	960	9	7
Kirkgate .	9	632	480	40	24	66	31	626	11	4
West . . .	209	3,043	2,501	91	120	437	134	3,194	48	10
N. West . .	116	1,929	1,565	64	65	259	92	2,035	8	2
Total . .	661	17,178	13,881	490	509	2,297	693	16,773	996	70

Wards.	INMATES.													
	Children.								Lodgers.		Domestic Servants.		Total.	
	Children.													
	Under 9 Years.		Between 9 and 13.		Between 13 and 21.		Above 21.							
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
North . .	1,546	1,547	429	525	721	633	316	369	578	309	274	391	6,161	6,345
N. East . .	2,101	2,171	707	741	1,071	995	403	391	408	395	39	136	7,903	8,366
East . . .	1,948	1,920	674	662	932	855	271	267	368	313	38	148	7,001	7,270
South . . .	675	643	286	287	401	356	141	152	222	124	62	170	2,796	2,834
Mill Hill	551	507	171	174	239	258	120	167	166	79	247	816	2,311	2,856
Kirkgate .	312	346	99	133	185	151	87	69	107	55	164	309	1,505	1,633
West . . .	1,803	1,911	605	605	1,024	944	409	558	556	247	149	889	7,271	8,212
N. West . .	1,256	1,208	371	385	591	591	270	341	205	151	49	628	4,463	5,193
Total . .	10,192	10,233	3,342	3,512	5,164	4,783	2,017	2,314	2,610	1,673	1,022	3,487	39,411	42,709

The increase or decrease of immigrant families, as compared with the ratio, price, and kind of labour in which they are employed, will form an interesting subject of inquiry, as there can be little doubt that the indigenous population of Leeds has hitherto been insufficient for the various manufacturing purposes for which labour has been required. We are indebted to the Irish peasantry for this extension of some kinds of manufacture. The flax and worsted spinning trade of Leeds and Bradford, in periods of great demand, have derived material assistance from immigrant labourers; so much so as to have been relieved from a pressure, which would have exceedingly curtailed the active operations of their respective machinery. It is important to know the number of children who assist in forming both the passive and active population;

for by the former we can estimate the number that ought to be at school, and by a knowledge of the schools, and of the number of scholars attending them, we may arrive at the number of children whose early education is neglected. Having ascertained this, it will not be difficult to discover the cause, whether arising from inability or indisposition on the part of the parent, from want of school accommodation, or from any other reason, and to set about applying the remedy: we may also learn the number who are contributing to the maintenance of their families, and the amount which they produce. Statistics show, and experience confirms, the expense of an uncultivated population, as well as the discomfort always attendant upon it. It is trite to say that the price of punishment is, in the end, found to be far more costly than the expense of education.

If we subdivide the active population into its various branches, we shall see how it is employed; by which means we may ascertain the number of those who depend for their daily sustenance upon variable employment, subject to alterations or total extinction, which can neither be foreseen nor avoided. Thus, for instance, in looking back at the great changes that have taken place in the processes of manufacture in the staple article of woollen cloth, either by the introduction of machinery and its various improvements from time to time, or by changes in the fabric itself, we shall find every now and then a revolution to have taken place, whereby whole branches of industry have been displaced. Again, in the transposition of labour from the domestic dwelling to the mill, and back again, new features have been added, or taken away and restored, not only to the general character of the labourer, but to all about him. In looking upon these variations at the time they take place, we are apt in some instances to associate with them a greater amount of human misery than strictly belongs to them, while in others, it is far undervalued; and often the provident application of relief is overlooked in the anxious desire to meet instantaneous necessity, whereby suffering merit is pushed aside by the more importunate idlers, and charity is occasionally misapplied. However, if we knew correctly the number of those affected by any disturbance of occupation, we should be better able to estimate the amount of real distress, and to appropriate relief more correctly—by weighing the associated help arising between parent and child. Though it is true that the withdrawal of the means of sustenance in any quarter affects all more or less, yet it is obvious that there is a great difference in this respect between a population exclusively dependent upon one source of employment and that which has many sources within its reach.

For instance, when distress prevails among agriculturists, it is universal. In manufactures this is not the case; for, generally, when one branch is passive another is active, and *vice versâ*. The linen and the worsted trades are rarely both in the same state; each is commonly in the opposite extreme. The woollen is more variable; but, as in all these branches, there is a consolidation of labour amongst the labourers, the distress of the operative manufacturer is seldom, if ever, so bitter in the town as in the townships of Leeds, where, as in agriculture, labour is exclusive, and distress, when it does prevail, is also universal. The sub-division of the active population of Leeds may be thus attempted:—

Persons employed in the manufacture of woollen, worsted, cotton, silk, and flax goods, by power, that is, in mills	10,663
Woolcombers	138
Handloom weavers	1,289
Select trades	13,233
Miscellaneous ditto	17,916
Domestic servants, children, and others, not specified	38,881
Total	82,120

Among the select trades are 594 mechanics, which number being added to the persons employed in mills and woolcombing gives a total of 12,684 as the approximate gross number of persons composing the manufacturing population of the township. That these materially affect the interests of all the rest of the community, in the distribution of wages, and in the moral as well as social relations of life, there can be no doubt, but less, perhaps, in their physical state than has been imagined. We shall inquire in a subsequent part of this report into the amount of this influence.

Moral State of the Population.

The subjoined tables on crime have been carefully selected from the day-book at the police-office, and from such reports as could be obtained from Mr. Lancaster, the gaoler, and other persons acquainted with the facts. They are carried through nine years, and give the number of persons, both male and female, brought up before the magistrates during each year, with their ages in various periods, their trades, and places of residence; the results of summary proceedings before the Magistrates and before the Recorder at the sessions, with the number of times the same persons were brought up in one year.* It will be seen that the number of offenders brought to justice increased up to 1836, during which year there was a great addition, owing, doubtless, to the increased activity of the new police, which came into operation about that time; but that in each subsequent year there has been a gradual and progressive decrease. Then again, there is a table of the residences of the offenders, to show the amount of local and immigrant crime, and the number of offenders who really belong to the township and the out-townships. If that year be taken wherein the largest number of offenders belonging to the township of Leeds (to which, it must be remembered, all the previous tables are limited) were brought up, the amount of local crime seems but small. With regard to the quality of the offences, it does not appear that the increase in those of a serious nature has been at all great. The number of felonies in 1837-8 was not equal to those of 1831-2. The general increase in 1836 consists of drunken and disorderly persons; whilst the number of transported felons has diminished since 1834. There have been no means of ascertaining the education of the offenders, as these tables on crime have only reference to the past; but Mr. Lancaster has a series of tables in preparation by which the different effects of punishment on offenders can be in future ascertained.

The classes of persons who stand prominent as violators of the law

* Abstracts of the first four tables are appended; the last three are wholly omitted.

are butchers, blacksmiths, bricklayers, clothiers, woolcombers, dyers, joiners, masons, machine-makers, shoemakers, tailors, watermen, and weavers. It is true, however, that these trades are the most numerous ; but this is not the sole reason why they thus appear. It seems that certain classes, and especially those above named, are more addicted to intemperance and dissipation than the others. That some of the persons so engaged are more immoral than the rest, and that their habits and practices operate most unfavourably upon the general character of their respective neighbourhoods, is a truth which cannot be denied. The common effects of congregation are visible, not only in themselves, but in their families : the children in the wards where these persons reside are marked by a degree of brutality which does not exist in others. Thus, for instance, the mill girl from the country, within three or four miles of Leeds, is seemly in her person, and generally decorous in her deportment. If the question is asked where she lives, she tells you with civility ; and if inquiry be made after the habits of her parents, they are found to be poor but industrious persons, living upon low wages, coming into the market together, and leaving it again so as to be at home not later than eight at night. Take, on the other hand, a mill girl from the town, the offspring of those parents who are described above as thus congregating ; she leaves her work and hastens to her associates, with whom during the day she has planned some project for the evening ; her father is at the public-house ; her mother, thus left alone for months, has herself become careless in her person, and almost reckless in her habits ; the daughter thus has no one to guide her ; her associates at home and abroad are abandoned ; eventually she becomes so herself, and is lost to all sense of decency. Many thus become independent and ungovernable, and are avoided by those overlookers who have the sense to notice this difference and the courage to apply their wisdom—who act under the idea that no valid reason exists why a mill should not be as well regulated and as moral as a dwelling.

Abstract of Tables relating to Crime in the Borough of Leeds.

TABLE A.—Number and Ages of Persons brought before the Magistrates.

Number brought before the Magistrates.				Ages of Persons brought before the Magistrates in 6 Years, from 1833 to 1838.	
Years.	Males.	Females.	Total.	Ages.	Number.
1830	1,659	385	2,044	Under 15 . . .	696
1831	1,917	456	2,373	From 15 to 21 . . .	5,147
1832	1,709	415	2,115	22 .. 31 . . .	5,308
1833	1,961	439	2,400	32 .. 41 . . .	2,424
1834	1,878	429	2,307	42 .. 51 . . .	1,024
1835	2,025	391	2,416	52 and upwards .	525
1836	2,539	665	3,204	Not known	284
1837	2,132	639	2,771		
1838	1,750	560	2,310	Total	15,408

TABLE B.—Number of Males of each Trade from which more than Five Persons were Apprehended Annually during the Nine Years from 1830 to 1838.

Butchers, 272—Blacksmiths, 87—Bricklayers, 201—Bakers, 46—Clothiers, 180—Clerks, 46—Croppers, 330—Colliers, 108—Coopers, 51—Cloth-dressers, 922—Combers, 163—Cloth-drawers, 55—Dyers, 245—Flax-dressers, 97—Hawkers, 79—Joiners, &c., 335—Labourers, 8,545—Masons, 162—Machine-makers, 175—Moulders, 58—Mechanics, 98—Plumbers, 47—Painters, 55—Pressers, 62—Printers, 60—Sweeps, 138—Soldiers, 101—Sawyers, 80—Shoemakers, 475—Slubbers, 60—Seamen, 78—Tailors, 350—Tanners, 49—Vagrants, 193—Watermen, 346—Weavers, 1,083—Wool-sorters, 59—Whitesmiths, 142.

TABLE C.—Residences of Offenders, 1830 to 1838.

Within the borough of Leeds, 15,681—Holbeck, 539—Hunslet, 675—Armley, 202—Wortley, 225—Beeston, 90—Bramley, 148—Chapel Town, &c., 58—Farnley, 19—Woodhouse, 250—Headingley, 53—Meanwood, 10—Kirkstall, 78—Halton, 13.—Without the borough: England and Wales, 2,417—Scotland, 241—Ireland, 629—Foreign Countries, 60—Unknown, 311.

TABLE D.—Nature of the principal Offences in each Year.

Years.	Felony.	Drunk and Disorderly.	Vagrancy.	Assaults.	All other Offences.
1830	471	736	395	284	158
1831	617	863	437	268	188
1832	580	678	423	266	168
1833	583	823	472	335	187
1834	490	724	527	389	177
1835	604	751	515	391	155
1836	486	1,516	591	458	150
1837	548	1,133	530	416	144
1838	564	813	487	332	114

To the tables of crime may not inappropriately be appended a statement of the number of inns, beer-houses, common lodging-houses, gambling-houses, and houses of ill fame, which are as follows :—

In the whole township: Inns, 216—Beer-houses, 235—Lodging-houses, 41, with 156 beds, of which all but 3 are in the North, North-east, and Eastwards—Gambling-houses, 2, both in the Mill-hill ward—Houses of ill fame, 51 public and 47 private, of which 38 public and 34 private are in the above-mentioned first three wards.

It will be perceived that the number of inns and beer-houses is 451, or about 1 to every 180 of the population. To attempt to ascertain the consumption of exciseable liquors in them would, in the first place, be intrusive, and in the next, would lead to no certain or useful result. If the consumption could be correctly ascertained, it would not be confined to the inhabitants of the township only, as it is shared by all travellers and other non-resident consumers, and would, therefore, form no criterion of local value.

On the subject of prostitution, it appears that, amid so large a population, the number of houses of ill fame is comparatively small; and perhaps the general feature which prostitution seems to bear on the face of the town is not by any means so extensive as in many other places. There is reason, however, to fear that it is upon the increase rather than otherwise, and that the habits of some of the people show a deplorable laxity of domestic discipline. No doubt a great deal of this arises from the congregations that exist in those filthy streets which

have been before referred to, and to the want of better general regulations, both civil and domestic.

Religious Accommodation.

The next point of inquiry is the church and chapel accommodation in the township, which is shown in the following table, made up in the present year, with its proportion to the population in each ward.

Wards.	Name of each Place of Worship.	Denomination.	Sittings in each.	Total Religious Accommodation of the Ward.	Population of the Ward.
North . . .	St. James . . .	Church . . .	1,200	3,686	12,506
	St. Patrick's . . .	Catholic . . .	340		
	Ebenezer . . .	New Con. Meth. . .	800		
	Ann Carr's . . .	Primitive Meth. . .	180		
	George's-street . . .	Independent . . .	530		
	Byron-street . . .	Ditto . . .	450		
	Zoar . . .	Southcotites . . .	186		
N. East . . .	St. Mary's . . .	Church . . .	1,434	7,364	16,269
	St. Mary's . . .	Catholic . . .	730		
	St. Peter's . . .	Old Con. Meth. . .	2,600		
	Old Chapel . . .	New Con. Meth. . .	1,200		
	Stone Chapel . . .	Association Meth. . .	700		
	Quarry-hill . . .	Primitive Meth. . .	500		
	Duke-street . . .	Inghamites . . .	200		
East . . .	Rehoboth . . .	Old Con. Meth. . .	400	800	14,271
	Zion Chapel . . .	New Con. Meth. . .	400		
South . . .	Christ Church . . .	Church . . .	1,500	5,710	5,630
	Wesley Chapel . . .	Old Con. Meth. . .	1,410		
	Bethesda Chapel . . .	New Con. Meth. . .	600		
	Salem . . .	Independent . . .	1,200		
	Water-lane . . .	Quakers . . .	1,000		
Mill Hill . . .	St. Paul's . . .	Church . . .	1,400	5,080	5,167
	Trinity . . .	Ditto . . .	720		
	South Parade . . .	Baptist . . .	1,380		
	Albion Chapel . . .	Independent . . .	800		
	Mill-hill Chapel . . .	Unitarian . . .	780		
Kirkgate . . .	St. Peter's . . .	Church . . .	2,800	3,330	3,138
	Call-lane . . .	Arian . . .	530		
West . . .	St. George's . . .	Church . . .	1,654	8,104	15,483
	St. Ann's . . .	Catholic . . .	900		
	Oxford-place . . .	Old Con. Meth. . .	2,550		
	Park-street . . .	Association Meth. . .	800		
	Rehoboth . . .	Primitive Meth. . .	800		
	Queen-street . . .	Independent . . .	1,400		
N. West . . .	St. Mark's . . .	Church . . .	1,327	7,377	9,656
	St. John's . . .	Ditto . . .	1,200		
	Brunswick . . .	Old Con. Meth. . .	2,500		
	Woodhouse . . .	Ditto . . .	500		
	Woodhouse . . .	Primitive Meth. . .	200		
	Belgrave . . .	Independent . . .	1,650		
Total				41,451	82,120

In dividing this accommodation according to the sects, we see that there are 9 churches belonging to the Establishment, containing 13,235 sittings; 3 Catholic chapels, with 1,970 sittings; 17 Methodist chapels, with 16,340 sittings; 6 Independent chapels, with 6,030 sittings; and 5 belonging to other sects, and containing 3,876 sittings.

The distribution of the accommodation is very unequal. In the North, North-east, and East wards, which are inhabited chiefly by the labouring classes, there are only 11,850 sittings for a population of 43,046 individuals, while in the other and more opulent wards there are 29,601 sittings for 32,074 persons.

The remaining institutions of a religious character existing in the town are, the Religious Tract Society, the Leeds Branch Missionary Society, the Leeds Ladies' Branch Bible Society, the Leeds Auxiliary Bible Society, the Auxiliary Methodist Missionary Society, the District Committee for Promoting Christian Knowledge, the Association in aid of the Moravian Mission, the Auxiliary Hibernian Society, with a few others.

Education.

The next branch of inquiry to which the committee have to refer the Council is that of education. The subsequent tables relate to this interesting topic, which is divided into three classes, viz., week day general, week day factory, and Sunday schools.

General Day Schools.

WARDS.	Total Number of Schools.	Schools kept by		Number of Teachers having other occupations.	Number of Scholars.		Amount of charge per head, per Week.			Subjects taught.			
		Males.	Females.		Males.	Females.	Under 3d.	3d. to 6d.	6d. and above.	Elements of Read- ing.	Knitting and Sew- ing.	Fancy work.	Writing and Ac- counts.
North . . .	20	4	16	2	325	247	10	6	4	20	16	..	8
North East . .	25	8	17	..	718	531	18	5	2	25	15	..	8
East . . .	17	3	14	2	257	261	14	2	1	17	15	..	2
South . . .	12	3	9	1	253	149	7	1	4	12	9	1	5
Kirkgate . . .	6	2	4	..	332	260	4	2	..	6	3	..	5
Mill Hill . . .	11	4	7	..	412	274	5	2	4	11	5	1	8
West . . .	41	12	29	2	769	859	14	6	21	41	29	12	26
North West . .	22	6	16	1	422	330	10	3	9	22	15	4	12
Total. . .	154	42	112	8	3,488	2,911	82	27	45	151	107	18	74

The number of factory schools not included in the above table is 20, containing 460 scholars, of whom 230 are males and 130 are females. The general charge is 2d. per week, which is usually paid by the employer.

The number of Sunday-schools is 50, of which 14 are connected with the Church of England, 16 are in the Union, and 20 are not in the Union. The number of children in each class is as follows:

Church of England, 1,843 boys 1,805 girls. 4,130 total.

In the Union . . 1,637 ,, 1,628 ,, 3,265 ,,

Not in the Union . 1,789 ,, 2,245 ,, 4,034 ,,

Total . . 5,269 5,678 11,429

The total number of teachers in these schools is 1425.*

It thus appears that 6,759 children are at school on the week days, being about 1 to 12 of the whole population, and that 11,429 are partaking of Sunday-school instruction in this township, which probably may be the means of still further reducing the amount of crime, if they are wisely and perseveringly managed. It may not be amiss, for a few moments, to glance at the character of these schools, and at the quality of the education given in them. Of the week-day schools it will be seen that out of 154, 112 are kept by females; that the charge per head in 109 is under 6*d.* a-week; that knitting and sewing are taught in 107, and writing and accounts in 74, or rather less than half. Many of those in which the charge is under 3*d.* a-week, bear the character of dame schools only, and are in fact more for keeping children out of danger during the employment of the mother, than for the purposes of real education. In very few is anything taught beyond the elements of the English language, by persons more fitted to be scholars than teachers; and rarely if ever upon a system based on proper principles. The factory schools also, with the exception of three or four, are similar to the others, and the education bestowed is of the most meagre description. Supposing that the children of the middle and higher classes occupy all the schools above 6*d.* a-week, let us, by taking the number of children in each ward belonging to the working classes, see how they are supplied, even with the kind of education which they can now obtain.

WARDS.	Population of the Ward.	Number of Houses under £10 Rent.	Working Population.		Number of Schools under 6 <i>d.</i> a week.	Children at School.
			2 Persons to a House, gives Parents.	2½ to a House, gives the Children.		
North Ward.	12,506	2,100	4,200	5,250	16	572
North East .	16,269	3,422	6,844	8,555	23	1,249
East . . .	14,271	2,917	5,834	7,367	16	518
South. . .	5,630	943	1,886	2,357	8	402
Mill Hill . .	5,167	348	696	870	7	686
Kirkgate . .	3,138	274	548	685	6	592
West . . .	15,483	2,104	4,208	5,260	20	1,628
North West .	9,656	1,465	2,930	3,662	13	752
					20 Factory Schools.	360
Total . . .	..	..	..	34,006	129	6,759

* The name of each school, and the number of scholars and teachers in it are given in the report.

As more than one half of the total number of children in the township are under 9 years, let one half of the children in the above table be taken as under 9, and the rest be supposed to be at work. The half of 34,006 is 17,003, and allowing one third for those that are too young, and away from school from necessity and other causes, viz. 5,667, and adding the 6,759 who are at school, there still remain 4,577 who are not deriving any benefit from education. If the Sunday-school education were systematized upon one general principle, and by it a solid and explanatory education were given, it would add materially to the general intellectual culture of the rising race; for the attendance at these schools exceeds that at the week-day schools by 4,670. But the public is apathetic to a question which is of such vital importance to our domestic and social welfare. Hard service and the most economic means to continue it are freely afforded by many persons as teachers in these excellent institutions, who, if they confer no other benefit on society, keep from the streets, and from the pollutions of congregation and idleness, 11,429 children of both sexes; leaving their own families, and sacrificing many comforts to this sense of duty; yet aided by niggard help, and uncourtenanced by the mass, on whom in fact they are conferring an inestimable benefit. If the quality of the education which the children receive be not very good, at least there is a moral restraint pervading these assemblages which cannot fail to be beneficial. They demand the sympathy of the public, and more than that, its help; and they deserve a forced place, if not a voluntary one, in the consideration of the whole community. The educational condition of the working classes in Mr. Marshall's mill at Holbeck is as follows, from whence some idea may be formed of what it is in Leeds, though your committee fear the example is too favourable to be taken as the ground for a general estimate.

	Under 13.	Between 13 and 18.	Total.	Per Centage proportion.
Can write . . . . .	..	328	328	..
Can read the Testament . .	164	266	430	48·4
„ Spelling Book . .	65	135	200	22·5
„ Primer	54	121	175	19·7
„ Alphabet	4	36	40	4·5
Cannot read . . . . .	..	43	43	4·9
Total	287	601	888	100·

The other institutions of an intellectual character are the Philosophical Society with its museum; the Literary Institution, and the Mechanics' Institution, with their libraries; the two public libraries, and Calvert's museum.

Physical Condition of the Population.

The last subject for consideration is the physical condition of the population, upon which the facts already laid before the Council have an important bearing.

Births, Deaths and Marriages in the Year ended July, 1839.

	North and North-East Wards.		North-West, West, Mill Hill.		South, East, and Kirkgate.		Total.		Marriages.
	Population 28,775.		Population 30,305		Population 23,039.				
	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	
July . .	101	98	98	68	76	54	275	220	103
August .	109	72	72	52	66	58	247	182	129
September .	108	105	97	55	63	63	268	228	122
October .	90	129	89	70	66	80	245	279	124
November .	71	138	97	67	64	91	232	296	123
December .	117	110	69	73	70	108	256	291	166
January .	63	87	94	76	56	68	213	225	120
February .	144	116	92	67	64	57	300	240	100
March . .	120	85	99	78	90	69	309	232	108
April . .	100	98	79	65	78	75	257	234	120
May . .	59	53	112	88	63	31	234	172	120
June . .	187	128	79	86	99	49	335	263	122
Total . .	1,269	1,219	1,077	839	855	808	3,201	2,866	1,457

The above table shows the births, deaths, and marriages in each month of the year ended July, 1839. The reference to the wards in which the greatest number of births and deaths took place is easy; but the marriages are spread over the township, and are not therefore thus divisible. On any future occasion a correct test can be applied to discover their increase or decrease, in proportion to the population. The total amount of inhabitants, with the marriages, births, and deaths in each ward, will show, in comparison with other districts, their disposition to matrimony, or otherwise, and thus afford scope for inquiring whether early and improvident marriages are generally formed, or not; and whether they are in any degree influenced by the kind of labour predominant in the wards, the rate of wages, and the annual amount of employment. The month of the year in which the greatest numbers of births and deaths occur, under the same rule, by retrogressive inquiry, will furnish the period of the year most productive of births, and that most fatal to human life, as well as the localities in which such differences arise. Thus, for instance, births are most numerous in June, and the deaths in November. If, in the statistics of the whole kingdom, the proportion of births to the population be 1 to 28, and of deaths 1 to 36, the condition of Leeds bears out the report of the Registrar-General as to its unhealthiness; for its births, in relation to the population, are 1 to 25, and its deaths 1 to 28½. It will be interesting to inquire whether the mortality be general over the town, or prevails in particular wards, and if so, to learn the cause, whether on account of the congregation of particular trades, or from causes totally independent of labour. The working classes reside most extensively in ratio to the population, in the North and Kirkgate districts of the Registrar, and here is the largest amount of deaths. Whence arises this? Is it produced by labour, and if so, by what kind of labour? Is it in consequence of insufficient ven-

tilation? of destitution? or of local disadvantages existing in the district? The amount of human life which seems at stake is surely ground for inquiry into this important branch of statistical knowledge. First, then, is labour the cause? Your Committee are anxious to meet the prevailing impression in all manufacturing towns, that "the labour" of the place is the source of fatality; intelligent persons are apt to receive this idea at first sight without inquiry into its truth. The staple manufactures of Leeds are woollen, worsted, and flax, and the total number of persons employed in these branches respectively are

Woollen trade . .	5,064
Flax ,, .	3,883
Worsted , , .	1,434
Total .	<hr/> 10,381

Now all writers on the effects of trade upon longevity, and especially Thackrah, admit the healthfulness of the woollen department, not merely as a branch of manufacture, but of occupation generally; the 5,064 persons employed in the woollen trade must therefore be subtracted from the total, in order to arrive at the number of those who, if manufacture has such an effect, must increase the mortality of the town of Leeds in so great a degree. There remain only 5,317, which number forms about the fifteenth part of the entire population. It is absurd to suppose for a moment that such a result arises from the diseases originating in, or by reason of the unhealthiness of the persons occupied in the manufacture of flax: for were they capable of producing such effects, like the steel-grinders of Sheffield, who know the date of existence which there is no probability of their exceeding, it would be equally known, and have become equally proverbial. It does not seem to be the province of your Committee to descant on the effects of trade on longevity, but it appears to them that there is no just ground for believing that the manufactures of Leeds unduly affect the mortality of its population. Besides, of the persons employed in the most unhealthy process in flax-spinning, viz. heckling, the number who are permanently so occupied is exceedingly small. It is true, that a great number of boys of tender age are to be found at the heckling machines, inhaling the dusty particles which arise during their labours; but they rarely continue more than three years, and remove long before permanent disease can possibly be formed in such numbers as to affect the mortality of so large a population. Again, in the spinning department, the most unhealthy of all its branches from the variation of temperature to which those who are employed in it are exposed—the female labourers are not often seen after 25 years of age; so that in no way can the increase of mortality be exclusively attributed to factory labour. Moreover, in those districts which are the most fatal, viz., in the north, north-east, and east wards, but few persons employed in flax labour reside; the population is mainly composed of shoemakers, tailors, dyers, butchers, bricklayers, smiths, hand-loom weavers, bakers, inn-keepers, provision-dealers, and the like. The Council is referred to a table of mortality,* taken from the statements of 1,742 widows, which shows, that these trades affect life, and to a great extent. It may be said, that the trades

* Not given in the Report.

in connexion with manufactures operate secondarily on longevity, but if any preponderance exists in trades, it is more likely to be in those in which the habits of the labourer are immoral, apart from the mere occupations, assisted by local causes of a different nature. The Council is also referred to the state of the streets, the size and condition of the houses in the several wards, as a key to the increase of mortality prevailing in particular wards; for as the population seems equally distributed throughout the town, there is no good reason why trade should affect mortality more in one division than another; but there is a cogent reason, when we find disease and death in proportion to the want of sewerage, ventilation, and cleanliness. No doubt, however, exists of the prevailing unhealthiness of the north, east, and north-east districts, Kirkgate, and the west;—it will be an interesting subject for future statistics, to inquire the cause, when tables are afterwards formed, which will give the results, some of which are now in course of preparation. If the great mortality in Leeds depends on infant life, the question naturally arises, Does the physical condition of the parents suffer by their occupation? or do the most births occur in situations where malaria, or other atmospheric influences are more powerful than infantile age may resist, with less means of sustentation than are necessary? In the aggregate of adult deaths, consumption seems the prevailing ailment, and this again favours the opinion, that local causes assist the effects of occupation; but as yet correct tables of mortality are too few, and the results are too incomplete to justify more than speculation, on a subject which of all others requires the most exact and complete data. Destitution as a cause, in the north-east and east wards, is worthy of attention; but the tables of the Benevolent Society show that a great portion of its charity is dispensed there, and much other charity is doubtless distributed among these people, although the data are not sufficiently precise to be implicitly relied on. In future returns from the Registrar of Deaths, whether this ratio of births and deaths be correct or no will be developed, and if these are taken together with the congregation of trades, and the means possessed of combating disease, accurate results must follow. If the deaths be in proportion to the trades, this will seem to modify the general mortality of the community. If trade seems to have an equal result in every ward, and yet the amount of deaths in each ward retains its ratio as now exhibited, the reason will doubtless be in local causes, which must be then examined. It is material, however, to know the rate of wages generally, which is distributed over this population, because without this knowledge, we shall not know how to form an opinion as to the means they have of combating the effects of disease actually arising from occupation, or the effects of other causes on the decayed condition of the physical system. Thus, for instance, shoemakers and tailors prevail as bodies in the north district, and these are trades which seem exceedingly prejudicial to longevity, either by the vicious habits which seem to attach to the persons following them, or by the operation of the trades themselves.

The following table of the rate of wages will materially assist the inquirer in ascertaining how far trades affect longevity; for it must be evident that where there is an exhaustion of the vital powers by physical agency, without the means of reproduction in quantity sufficient for re-

pairing the loss, the ultimate fatality will be greater in proportion than where the same amount of loss exists, with means more adequate to its restoration. The shoemaker or tailor, for instance, works no harder than the joiner or bricklayer, nor are they exposed to the same vicissitudes of weather and temperature; but, while one has 4s. 6d. a-week to supply the absolute requirements of nature, the other has 7 or 8 shillings. By taking the population in its different branches, it would not be difficult to ascertain the actual amount of wages distributed over the great portion of the active part, either weekly or annually, and thus to estimate the effect of destitution on the prices of Colonial and Home produce, during periods of scarcity or abundance of employment among the working classes within a limited area. Few persons know better than grocers and tea-dealers of the town, how general trade is moving; the demand for the luxuries of life is a correct barometer of the means within the power of consumers.

TRADES.	Average Weekly Wages.	Average Employment through the Year.	TRADES.	Average Weekly Wages.	Average Employment through the Year.
	£. s. d.	Months.		£. s. d.	Months.
Tailors . . .	0 16 0	11	Saddlers . . .	1 1 0	11
Shoemakers . . .	0 14 0	10	Weavers . . .	0 13 0	10
Painters . . .	1 0 0	9	Plane Makers. . .	1 1 0	12
Cloth Pressers . . .	1 0 0	9	Paper Stainers . . .	1 4 0	9
„ Drawers . . .	1 4 6	12	Gunsmiths . . .	1 5 0	12
Joiners . . .	0 19 6	11	Hatters . . .	1 4 0	10
Printers . . .	1 1 0	12	Mechanics. . .	1 4 0	12
Plumbers . . .	1 3 0	10	Dyers . . .	1 2 0	9
Smiths . . .	0 19 0	12	Curriers . . .	1 0 0	11
Shubbers . . .	1 4 0	9	Brass Founders . . .	1 5 0	11
Woolsorters . . .	1 1 0	10	Woodsawyers . . .	1 0 0	9
Plasterers . . .	0 18 0	9	Coopers . . .	1 0 0	11
Bricklayers . . .	1 3 0	9	Woolcombers . . .	0 14 0	10
Warehousemen . . .	1 1 0	12	Iron Moulders . . .	1 5 0	12
Wood Turners . . .	0 17 0	10	Turners . . .	1 2 0	12
Millwrights . . .	1 6 0	12	Wheelwrights. . .	0 18 0	10
Masons . . .	1 2 0	10	Worsted Piecers . . .	0 4 6	12
Woollen Piecers . . .	0 5 0	9	Preparers . . .	0 6 6	12
„ Fillers . . .	0 6 0	9			

It is no assumption to say, that various habits connect themselves with certain trades; for the records of crime show that shoemakers, tailors, bricklayers, smiths, and many classes of a similar nature, are both intemperate and dissipated in their habits, and these, being in accordance with the rate of wages, either in diminution or excess, materially contribute to shorten life. Their perpetual appearance before the magistrates for drunken and disorderly conduct proves them to be very liable to such irregularities. And a table of mortality, prepared by your Committee, confirms the fact that deaths occur more frequently among such trades than is perhaps imagined. In the north and north-east wards, all the trades that are so conspicuous before the magistrates for offences against morals, stand equally prominent in the same table of mortality. Occupations, therefore, have their influence on the ratio of

mortality; but to that must be added the effects of impure atmosphere, dirt, want of ventilation, and causes of a similar nature, and the consequences are probably double what they would be from the mere exercise of a particular calling. The shoemaker, for instance, averages only 14s. a-week, for the maintenance of a numerous family, or about 4s. 6d. per head. His sedentary habits, and daily consumption of the powers of life, show his to be a most fatal occupation; out of 58 deaths, 28 were by consumption. So also tailors,—their hours of labour, and that, too, in an impure atmosphere, exceedingly diminishes their chance of existence; their income, including their families, does not exceed, and seldom reaches, 5s. 6d. a-head per week; and out of 65 deaths, 35 were by consumption.

There is another topic to which the Council is referred, viz., to the number of children belonging to the families of particular classes. To the physiological statist, this is of considerable interest. Some important facts are shown in the following table:—

CLASSES.	TRADES.	No. of Persons.	Of whom are Single.	No. of Married Persons.	No. of Children.			No. of Children to a Family.
					Males.	Females.	Total.	
Manufacturing	{ Flax-dressers, handloom-weavers, dyers, and cloth-drawers. . . . }	2281	345	1936	2498	2411	4909	2.53
Out-door Handicraft . .	{ Labourers, bricklayers, masons }	2024	91	1933	2076	2102	4178	2.16
In-door Handicraft . .	{ Shoemakers, engravers, tailors, smiths, curriers, bookbinders, nail-makers, wheelwrights, wood-turners, cutlers, chairmakers, cloggers, gun and silversmiths . }	2354	331	2023	2244	2031	4275	2.11
Trades. . . .	{ Bakers, basket-makers, confectioners, butchers, cap-makers, druggists, cork-cutters, clock-makers, fishmongers, grocers, glass-dealers, greengrocers, hatters, hosiers, innkeepers, linen-draper, maltsters, music-sellers, milliners, oilmen, painters, provision-dealers }	2195	257	1938	1851	1948	3799	1.96
Independent and Professional	{ Agents, accountants, architects, artists, auctioneers, bailiffs, barristers, clergymen, book-keepers, independent, merchants, physicians, surgeons, solicitors, travellers, warehousemen . }	2417	472	1945	1742	2000	3742	1.92

Thus it is evinced that the greatest proportion of births takes place among the lowest class; next among those employed in out-door handicraft; then among in-door handicraftsmen; then among tradesmen; and lastly, among independent and professional people. Then we trace those persons who are most disposed to marry; viz., first, the out-door handicraftsmen, who have only 91 single out of 2,024; next tradesmen; then in-door handicraftsmen; then the manufacturing; and, lastly, the independent population. There are two or three other subjects which your Committee intended to have introduced fully into their Report, but they are prevented by the necessity of closing it, before the opportunity has been afforded of bringing out the details. These are the permanent Charity, the Benefit, and the Destitution Societies, distributed over the entire population. By permanent Charity, is meant the medical charities of the town, for the township; viz., the Infirmary, Dispensary, House of Recovery, Lying-in-Hospital, Eye and Ear Infirmary, and the medical dispensation of the Guardians of the Poor. By Benefit Societies is meant,—the Secret Orders and benefit clubs, which prevail in Leeds to a great extent, and have a material influence, not only on its population, but on its taxation. By its Destitution is meant the relief supplied by the Guardians of the Poor, except that given to vagrants. All of which information would have been highly interesting; and with respect to the Benefit Societies, exceedingly useful to their members. Your Committee, however, in conclusion, trust that the facts now presented, collected and collated at great personal trouble, will be sufficient evidence of the necessity of their labours; and they hope that these may lead the attention of the Councillors to the state of the wards which they represent, with the feeling that they are bound, by every principle of humanity, as well as of good faith, to redeem their pledges to the electors, and faithfully so to watch over and represent their local condition, that whether their wants or ills are social, moral, religious, or intellectual, they may be brought to the notice of the Council chamber, and means may be adopted to obtain their redress.

An Outline of the Commercial Statistics of Ceylon. By JOHN CAPPER, Esq., Corresponding Member of the Statistical Society of London.*

IMPRESSED with the belief that the Island of Ceylon will in a few years become one of our most productive, and, consequently, most wealthy and important colonies, in spite of the many obstacles thrown in its way

* Extract of letter from Mr. Capper, dated Colombo, April, 1839:—

“The inclosed facts and calculations have been thrown together during a few hours of cessation from mercantile pursuits, in the hope that perhaps some of them may not prove altogether unacceptable to your Society. I admit that many of the subjects are touched upon very briefly, but at present Statistics are so little cared for in this corner of the world, that it is extremely difficult to obtain any correct information from those who are best able to give it. The returns of customs duties may, I believe, be relied upon with confidence; but as much cannot be said with

by the narrow-minded policy of the local government, the compiler of this paper has thought that a few facts collected together, having reference to the progress of commerce in this island, would, whilst they pointed out in what articles of production that improvement had taken place, also induce many to turn their attention to the natural capabilities and resources of the island, and at the same time might not prove altogether uninteresting to a society having for its object the collection and dissemination of statistical information. That Ceylon will shortly rise into considerable importance, no one who has resided in it for a twelvemonth can doubt. There are various causes in operation, all tending to the same end. The first, and not the least important or these, is the superiority of climate and soil, joined to abundance and cheapness of labour. It is only within these few years that the capability of this island for producing coffee and sugar as articles of export, has been tested on a scale of sufficient magnitude, and the result has been of a most unequivocal and satisfactory nature, both as regards the quality and cheapness of the articles.

Another cause operating in our favour is the more than doubtful prospects of the West India planters, on whose estates labour is dearer, (or at any rate will be, when the total emancipation of the slaves has taken place,) and the climate is less favourable than in Ceylon.

There is yet one more thing auspicious to our interests, although perhaps more distant and uncertain in its effects, this is the establishment of steam-ships to the east, making Point de Galle their place of rendezvous for passengers from the presidencies. This alone will give an additional stimulus to trade, as well as make the island more known to the world than at present.

Till within this year or two, everything in the island has been carried on under the old Dutch system of mystification and monopoly, and it will be some time before we recover from its baneful effects. Of the statistics of the island little or nothing is known. The only information we possess are the Returns of revenue and the census, the latter of which is believed to be a very careless and imperfect work. The natives do not care to give any information to the government agents, who, in their turn, are equally indifferent to the collection of correct data.

The first Return which I am able to present is a statement of the value of imports into the Island of Ceylon, in each year from 1833 to 1837.

regard to the population returns. The table of shipping, as far as it goes, is also pretty correct, but the number of native vessels or dhonies trading between Ceylon and the Indian Continent were given so differently by various parties, that I determined to leave them out altogether until I could obtain some more correct and official returns. This paper must be considered merely as an earnest of what I intend and hope to do when a little longer residence on the island shall have enabled me to gain and digest more important data. Previous to my quitting England, in a conversation with your Assistant Secretary, Mr. Deverell, that gentleman said that, on application, I could be elected a corresponding member of your Society: if there be no impediment to this, I would feel that election to be both a pleasure and an honour to me; and perhaps my membership would give me a facility in obtaining information beyond what I now possess. (Signed) "JOHN CAPER.

"To the Secretary of the Statistical Society."

COUNTRIES.	1833	1834	1835	1836	1837
	£.	£.	£.	£.	£.
From Great Britain	60,706	70,340	69,879	99,979	160,924
„ India	230,038	269,660	251,661	293,561	352,016
„ Other States	30,146	32,724	30,635	17,627	28,298
Total	320,891	372,725	352,076	411,167	541,239
NATURE OF ARTICLES.					
Beer	4,498	3,937	2,644	3,735	4,327
Cotton cloth	80,587	110,551	116,259	167,560	220,873
Earthenware	4,811	3,703	3,650	3,310	5,232
Grain	147,974	173,958	141,434	150,627	185,712
Iron	4,445	1,325	4,795	4,569	7,096
Millinery, Hosiery, &c. . . .	778	5,091	4,180	6,609	9,488
Opium	2,205	1,394	1,315	1,360	1,580
Salt and Pickled Fish	3,250	1,705	2,207	3,556	6,718
Sugar	2,057	5,009	4,536	4,812	8,757
Spirits	4,978	4,097	2,374	2,829	3,659
Tea	1,463	1,673	1,471	1,286	1,835
Wines	16,592	12,958	9,813	10,832	21,117
Wheat	5,283	7,367	7,201	—	5,580
Sundries	41,964	41,952	50,089	50,074	59,230
Total	320,891	372,725	352,076	411,167	541,239

From the preceding table it will be seen that the imports have increased 70 per cent. between 1833 and 1837. Of this the greater portion is in our trade with Great Britain, which shows an increase of 10 per cent. from 1833 to 1835, and from that period to 1837 the enormous increase of 230 per cent. During the same periods our trade with India (import) increased respectively 9 and 40 per cent. And from other states the increase was about $1\frac{1}{2}$ and 24 per cent.

Of the articles imported, those which show the greatest improvement are sugar, cotton, cloth, and millinery. Beer, tea, and wheat have remained almost stationary, while there has been a decided falling off in the annual consumption of opium and spirits, a most gratifying circumstance to the well-wishers of our labouring population.

It is, I believe, generally admitted that the consumption of necessary articles in every-day life keeps pace with the increasing population of a country, and that the demand for articles of comfort and luxury is in proportion to their advance in civilization and refinement. Allowing this, then, to be the case, we shall find, by a careful examination of the articles imported into Ceylon, that the increase has been chiefly, if not entirely, in those which administer to artificial wants and enjoyments; while upon the ordinary necessities of life there has been no greater increase than might be expected from a growing population. The importation of articles of luxury in 1837 shows an increase of $63\frac{3}{4}$ per cent. over that of 1833; while the addition to the imports of ordinary articles of consumption in the same time is only $6\frac{1}{4}$ per cent.

If the Government Returns of the population be correct, it would appear that the share of each individual in the articles imported into Ceylon was, in 1833, 5s. $8\frac{1}{4}$ d.; in 1834, 6s. $4\frac{1}{2}$ d.; in 1835, it fell to

5s. 7½*d.*, less than in 1833. In 1836 there was no census; but, judging of the increase of population by the preceding and following years, we may say that the average share of each was about 6s. 10*d.*; and, in 1837, it was 8s. 7¼*d.* At first sight this may appear an incorrect statement from the insignificance of the sums, but calculations will bear out the truth of it.

Out of the million and a quarter, which is the present population of Ceylon, not 1,000 are Europeans, and about 5,000 or 6,000 are of Portuguese extraction. Of the natives there are about 200 head-men or petty princes, and perhaps 4,000 middlemen of some property and influence. These being deducted, there are 1,244,800, of whom we may say the 44,800 are of a superior class, being servants in families, warehouse-keepers, and messengers, and there then remain 1,200,000 of the very lowest order. These are mere coolies and labouring mechanics with their families. The number actually employed in agriculture, manufactures, and commerce, including adults and children, is 613,000; leaving thus 587,000 old and young, incapable of labour. We may safely say that 600,000 of the above labourers are coolies (including some women and children), who earn 6*d.* a-day. They never work above half the year; their earnings will amount to 3*l.* 18s. in twelve months, and as there is for every one in a family capable of work another unfit for it, we shall find that the sum upon which each of this class exists is 1*l.* 19s. annually. The articles necessary to these people are simple, and almost entirely of native production. The cocoa-nut tree supplies them with food, fuel, oil, and domestic utensils. Fish and fruits are in abundance; and the only articles of a foreign nature are a little rice (a great deal being grown in the island) and a yard of cotton cloth for a girdle. The children, until the age of 10 or 12, do not even require the latter. This immense number of natives, therefore, cannot expend more than 2s. each annually in imported articles, and this difference will go to make up the amount expended by the other classes, European and native.

Ceylon is divided into five provinces, viz., the Central, Western, Northern, Eastern, and Southern. The four latter are trading provinces, the former agricultural only. The greater proportion of trade is carried on in the western province, the principal ports in which are Colombo and Chilaw. In 1833, we find that the amount of duties on imports into this province was 30,183*l.* In 1834, it was 35,672*l.* In 1835, the increase was not so great, the total value being but 36,491*l.* In the following year, however, the increase was near 5,000*l.*, the import duties amounting to 41,093*l.* In 1837, there appears a falling off in the customs, owing to the reduction of duties, and not to any decrease in the commerce, which has, on the contrary, materially increased. This year there seems to have been but 38,659*l.* collected in this province; there is, however, every reason to believe that the Customs' Returns for 1838 will show a considerable increase. In the northern province the chief ports are Manar and Tafna. The duties in 1833 were 4,139*l.*; in the succeeding year they had increased 50 per cent., being 6,681*l.*; but, in 1835, they fell to 5,543*l.* They amounted to 6,324*l.* in 1836; and, in 1837, they decreased to 6,225*l.* Trincomalie is the commercial port of the eastern province; but, although it has one of the finest harbours in the world, there is but a very trifling trade

carried on there, it being chiefly the rendezvous of men-of-war for provisions and repairs. In 1833, the import duties in this province amounted only to 1,657*l.*; and, in 1837, to no more than 2,316*l.* The southern province, having Galle for its principal port, ranks third in importations, the amount of customs' duties in 1833 being 4,057*l.* In 1834, the amount was but 3,333*l.*; in 1835, it rose to 4,008*l.* The following year there was a slight increase, the amount being 4,299*l.*; but, in 1837, it again fell off to 4,186*l.* The following is the proportion of the various articles imported into the four provinces:—In the western, rice is as 10, cloth 8, sundries from England $3\frac{1}{2}$, sundries from other places $1\frac{3}{4}$; in the northern, rice is 10, cloth $3\frac{1}{2}$, sundries from various states $1\frac{1}{2}$; in the eastern, rice being 10, cloth is 13, sundries from England $1\frac{1}{4}$, and sundries from other places $4\frac{1}{2}$; in the southern province, taking rice as 10, cloth will be $1\frac{1}{2}$, sundries from England $\frac{1}{8}$, and from other places 4. We thus find that rice, in proportion to other imports, is greatest in the southern province, and least in the eastern; that grain being cultivated in the greatest quantities in the latter province, and in the least quantities in the former.

We now arrive at the most interesting part of our inquiries, viz., that portion which relates to the produce of the island. The following table exhibits

The VALUE of the EXPORTS from the ISLAND OF CEYLON in each Year from 1833 to 1837.

COUNTRIES.	1833	1834	1835	1836	1837
	£.	£.	£.	£.	£.
To Great Britain . . .	42,408	76,977	79,596	228,501	192,080
India	87,216	62,502	104,018	91,939	87,767
Other States . . .	2,905	6,353	16,652	14,078	16,174
Total	132,529	145,833	200,267	334,519	296,023
NATURE OF ARTICLES.					
Arrack	12,425	7,737	7,216	7,471	12,215
Aracca Nuts	11,325	8,526	10,496	19,946	27,924
Cocoa Nuts.	5,630	4,243	6,710	3,557	6,048
Coffee	26,020	38,637	59,047	150,642	106,999
Coir (rope and loose) .	8,512	5,198	5,333	15,109	8,142
Pearls	32,059	No fishery	40,346	25,816	16,087
Cinnamon	8,272	35,559	22,664	58,494	49,263
Cocoa Nut Oil . . .	5,872	5,159	12,099	15,781	28,334
Sundries	22,411	40,772	36,352	37,700	41,008
Total	£ 132,529	145,833	200,267	334,519	296,023

The improvement in the annual exports of Ceylon is far more rapid than in the imports; and this is the more gratifying when we consider the disadvantages under which this branch of our commerce labours, from the very unequal taxation imposed upon it, as compared with the imports. In 1837, when the imports amounted to the value of 541,239*l.*, the duties arising from them amounted to no more than 51,398*l.*; whilst, in the same year, the produce exported from the island, amounting to only 296,023*l.*, or rather more than half of the imports, was burthened with duties to the amount of 75,474*l.* In the former

case the tax paid to the Custom-house is only at the rate of $9\frac{1}{2}$ per cent., but in the latter it is nearly tripled, being at the rate of $25\frac{1}{2}$ per cent.

From the preceding table it will be seen that the increase of exports has taken place chiefly in the two articles of coffee and cocoa nut oil. Other articles have improved from time to time, but not with the steadiness of these two. Our coffee and cocoa nut oil being almost entirely shipped to Great Britain, it necessarily follows that our trade with that country has benefited most materially. The table shows this to be the case, for we see that, from 1833 to 1835, our exports to Great Britain had increased 185 per cent., and from that time to 1837 they had further risen 240 per cent. Our exports to the continent of India were the same in 1833 and 1837, although they had varied considerably in the intermediate years, which fluctuation the second table shows to have arisen from the variations in the produce of the pearl fisheries, pearls being exported exclusively to India.

Our trade with foreign states has also increased considerably. There was a difference of 250 per cent. in 1834 over the preceding year, and in 1835 of nearly 300 per cent. In 1836 it fell off, but in the following year maintained its former favourable position. The increase in this branch of our trade has been chiefly with France and North and South America. To the former country the staple article is cinnamon, and to the latter cocoa nut oil, coir rope, betel nuts, and cinnamon.

The law which prohibits articles from foreign countries being landed here by foreign vessels is highly detrimental to our trade with other states, and has caused similar prohibitory enactments on their part. Were it annulled, there can be little doubt that extensive operations would take place between us for wines and ornamental goods on the one hand, and spices and oil on the other.

A TABLE showing the PROPORTION of EXPORTS and IMPORTS to and from Various Countries.

Years.	GREAT BRITAIN.				INDIA.		
	Exports.	Imports.	Excess of Exports.	Excess of Imports.	Exports.	Imports.	Excess of Imports.
	£.	£.	£.	£.	£.	£.	£.
1833	42,408	60,706	..	18,298	87,216	230,033	142,822
1834	76,977	70,340	6,636	..	62,502	269,660	207,157
1835	79,596	69,879	9,716	..	104,018	251,561	147,542
1836	228,501	99,979	128,522	..	91,939	293,561	201,621
1837	192,080	160,924	31,156	..	87,767	352,016	264,248
Years.	OTHER STATES.				TOTAL.		
	Exports.	Imports.	Excess of Imports.		Exports.	Imports.	Excess of Imports.
	£.	£.	£.		£.	£.	£.
1833	2,905	30,146	27,241		132,529	320,891	188,361
1834	6,353	32,724	26,370		145,833	372,725	226,892
1835	16,652	30,635	13,983		200,267	352,076	151,808
1836	14,078	17,627	3,548		334,519	411,167	76,647
1837	16,174	28,298	12,124		296,023	541,239	245,216

In the western province the exports are principally to Great Britain ; about $\frac{1}{11}$ being to foreign states, $\frac{1}{17}$ to British colonies, and $\frac{1}{200}$ coastways. The articles shipped from this province are cinnamon, cocoa nut oil, coffee, coir rope, clove oil, arrack, cocoa nuts, and aracca nuts. The customs' duties on exports collected in this province in 1833 were 11,186*l.* ; in 1835 they amounted to 50,721*l.* ; and in 1837 they rose to the sum of 72,038*l.*, of which 67,166*l.* consisted of duties upon cinnamon.

The northern province exports chiefly to British colonies and coastways, with a trifling amount to foreign states, and nothing to Great Britain. The articles are principally tobacco, timber, and chanks. The export duties of this province in 1833 were 7,426*l.* ; in 1835, 5,765*l.* ; and in 1837, no more than 1,406*l.* The falling off has been in the trade to the colonies, as the coasting trade shows an increase. The decrease is in tobacco.

The export trade in the eastern province is very inconsiderable, being principally coastways, with some few articles to our colonies, consisting chiefly of cocoa nuts and aracca nuts. In 1833 the customs' duties on the exports of this province were hardly 100*l.* ; in 1835 they were no more than 36*l.* ; and in 1837 they rose to 165*l.*

The southern province exports to a considerable amount, owing to its port, Galle, being a *dépôt* for cinnamon, which spice is only permitted to be shipped at this place and Colombo. Besides cinnamon, it exports large quantities of arrack to the colonies, and chanks and cocoa nuts coastways. The cinnamon is shipped principally to Great Britain, although some quantity finds its way to foreign states. The duties on exports from this part of the island were, in 1833, 1,481*l.* ; in 1835, 5,665*l.* ; and in 1837, 9,066*l.* Of this latter sum not less than 8,308*l.* were paid for cinnamon duties. The particular seasons for trading in the various provinces may be ascertained by finding the months in which the greatest or least amount of duties, export and import, were paid into the customs. In the western province, the greatest amount of duties was collected in February, and the least in October ; in the northern province, the largest sum was also paid in February, and the smallest in December ; in the southern province, the month of April shows the largest sum collected, and October the least ; in the eastern province, the greatest amount appears to have been in September, and the smallest in February. Throughout the island the shipping months are the first four in the year, during the north-east monsoon. In the south-west monsoon, from May to September, few vessels arrive at Colombo, the roads being considered unsafe for them at that season.

The number of British vessels which entered the port of Colombo between the years 1833 and 1837 does not appear to have increased, however much the trade of the island may have improved in that period. In 1833 there were 36 British ships entered at Colombo, with a tonnage of 11,650 tons. In the following year there were but 29 arrivals of 10,045 tons. In 1835 the number of entries was 28, the tonnage of which amounted to 9,085. In the succeeding year no more than 24 British vessels arrived in the port, with a tonnage of 7,630 ; and in 1837 there were 29 ships entered with a tonnage of 10,300.

Foreign vessels are very irregular in their arrival, owing to the

uncertainty which is attached to their transactions in our produce, arising both from variations in the state of the two markets, and from their inability to traffic on the island with their own articles. In 1833 the number of foreign vessels, chiefly French, which entered Colombo, was 7. In 1834, 4 arrived. The following year shows an entry of 10 vessels. In 1836 only 2 appear to have touched at the island; but in 1837 their number increased to 11. The chief and almost only produce which they ship is cinnamon, for which they pay either in Company's rupees, or with clarets and fancy goods which they leave on the Coromandel coast to be brought down in native or British vessels.

By the preceding facts, it would appear that the trade of Ceylon had been at a stand still for some years past, which, however, is far from being the case. The fact is, that in the above returns of shipping there have been included many vessels which have only touched at the island for water and provisions either on their way to or from India, and it is in these that the falling off has taken place, and not in the regular traders from England, which, on the contrary, have been annually increasing, as will be seen by reference to the following table of arrivals from various countries.

From	1837	1836	1835	1834	1833
England	15	11	10	9	8
Ditto (not trading to Ceylon).	—	1	3	3	6
France	5	3	6	2	3
Indian Ports	14	10	13	13	26
Mauritius	8	1	3	5	3
Other Places	—	—	3	1	4
Total	42	26	38	33	50

This table has been compiled with care from official records, and may be considered as a pretty fair statement of our commercial shipping. It is, however, widely different from the account of vessels entering Colombo as stated by Mr. McCulloch in his *Commercial Dictionary*, upon the authority of the Returns put forth by the Board of Trade. According to this statement there were, in 1830, 11 arrivals from Great Britain; from British colonies and India, 878, and from foreign states the number is stated to have been 169; 878 vessels from British colonies and India would be far beyond the truth, if every craft and fishing-boat were to be included. In that number, however, are no doubt included all the native traders: besides which, many vessels are in the habit of going over to the coast of India to take in part of their cargo, and return to fill up at Colombo, and it is probable that each of these entries into harbour is put down as a distinct vessel, a practice that is calculated to mislead a stranger on the subject of our commerce. As to the return of 169 vessels from foreign states, there is a still grosser mistake. No person resident on the island could suppose that more than a tithe of that number ever arrives here.*

* These mis-statements must arise from the manner in which the accounts are made up by the local government, as the returns published by the Board of Trade for more recent years exhibit the same errors.—Ed.

The following is a Return of the number of vessels that passed through the Pamban channel, which forms the northern entrance into the Gulf of Manar, and the passage between Ceylon and the adjoining continent, in the years 1837 and 1838.

Months.	1837.				1838.			
	Vessels.	Dhoniess.	Total.	Tonnage.	Vessels.	Dhoniess.	Total.	Tonnage.
January . . .	2	18	20	843	3	18	21	955
February . . .	1	31	32	830	3	38	41	2,035
March . . .	4	48	52	2,580	4	48	52	2,580
April . . .	6	84	90	4,370	6	164	170	8,811
May . . .	4	37	41	2,164	4	57	61	3,095
June . . .	8	34	42	1,640	11	56	67	3,700
July . . .	9	37	46	1,820	17	54	71	3,132
August . . .	17	29	46	2,127	22	131	156	6,500
September . . .	18	48	66	2,131	24	118	142	5,855
October . . .	13	42	55	2,840	20	107	127	5,681
November . . .	9	58	67	2,730	17	126	143	5,849
December . . .	2	22	24	1,256	5	36	41	1,782
Total . . .	93	488	581	25,334	136	956	1,092	50,005

The number of fishing boats in the island has been estimated at 1,800, and this cannot be far from the truth, if we consider the population of the island, and the vast numbers who live chiefly upon the produce of the fisheries. Each of these little canoes is worth about 50 dollars, or 4*l.*, which gives, as the amount of capital invested in the fishing trade, 7,200*l.* for boats, and perhaps 5,000*l.* for nets, sails and other implements: from the employment of this sum of 12,200*l.*, government derives an income of 6,000*l.* or 7,000*l.* a-year, a most grievous tax upon the poorer classes, who are the principal consumers of fish. By an order in council the poor fisherman is compelled to carry his cargo to licensed bazaars, and sell it by public auction, in order that the farmer of the tax may receive his full per centage. The consequence of this is that a great portion of the fish is spoiled by being carried through the streets exposed to a tropical sun; which evil might be obviated either by permitting the fish to be sold on or near the beach, or else by abolishing the present duty altogether, and substituting for it a licence for all boats engaged in fishing. The latter would be far preferable, as it would cheapen fish and throw more boats into the trade.

The present supposed population of Ceylon has been alluded to in a former part of this paper in connexion with the taxation of the island. I say *supposed*, because although official returns are annually made from each district, there is so little confidence to be placed in them, that they can be looked upon only as approximations to the truth. Much of this incorrectness arises from the apathy of the parties entrusted with the collection of the census, and much also from the ignorant prejudices of the natives, who imagine that their European masters have some sinister design in examining their numbers and occupations thus closely. This jealousy will however wear off with time and enlighten-

ment, and it may be hoped that our Government will evince a little more zeal in the cause of statistics, and give us some more carefully collected data by which we may arrive at a satisfactory conclusion with regard to the present condition of Ceylon.

A Table of the Labouring Population of Ceylon, compiled from Official Returns, showing the division of Occupation in each Province.

Provinces.	1833			1834		
	Agriculture.	Manufactures.	Commerce.	Agriculture.	Manufactures.	Commerce.
Western	165,498	7,780	10,538	157,980	11,846	12,150
Southern	78,412	8,495	10,744	80,441	10,858	8,750
Eastern	9,733	1,256	2,610	9,514	2,583	980
Northern	59,208	5,399	20,820	66,222	14,902	20,991
Central	41,608	2,087	2,390	42,051	1,905	2,162
Total	354,459	25,017	47,102	356,208	42,094	45,033

Provinces.	1835			1837*		
	Agriculture.	Manufactures.	Commerce.	Agriculture.	Manufactures.	Commerce.
Western	111,601	13,391	11,456	233,212	39,255	45,445
Southern	71,694	11,366	9,040	88,447	15,422	13,545
Eastern	8,930	3,017	1,427	10,197	1,932	1,439
Northern	67,662	18,992	12,454	67,662	18,992	12,344
Central	84,727	3,931	8,531	60,000	2,000	3,110
Total	344,614	50,697	42,908	459,518	77,601	75,883

The following is the proportion which the labourers of Ceylon bear to the entire population, according to the preceding table, for the year 1837, which was the last census.

Provinces.	Agricultural.	Manufacturing.	Commercial.
Western	44 per cent.	8 per cent.	9 per cent.
Southern	33 "	6 "	5 "
Eastern	19 "	3½ "	2½ "
Northern	28 "	7½ "	5 "
Central	36 "	1¼ "	1¾ "

In the year 1833 the agricultural population averaged 14 to the square mile; the manufacturing 1, and the commercial 1¾. In 1834 the former and the latter remained in the same proportion, but the manufacturing averaged 1½, and in the following year 2; both the others remaining nearly the same. In 1837, however, we find that the population engaged in agriculture rose to 18½ to the square mile, in manufac-

* There was no census in 1836.

tures it was 3. and the same with those employed in commerce. It would appear by these facts that every branch of industry had received a stimulus in the latter year, more especially agriculture. This improvement was particularly visible in the Kandyan, or Central Province, and it arose from the large tracts of land which were being planted with coffee on every side, both by natives and Europeans, but especially by the latter, who are now beginning to appreciate the capabilities of the Ceylon soil for this plant as well as for sugar. In 1834 there were not more than three coffee estates belonging to Europeans, whilst at the present moment there are upwards of twenty planted with trees, as many more in the course of formation, and three yielding crops. A sugar plantation has been formed near Kandy, and seems to answer every expectation formed of it. A few months ago the first sample of Ceylon sugar was sent home from this estate, and it was pronounced by several West India planters to be equal to the finest Jamaica. By far the largest portion of the manufactures of our island is carried on in the Western Province, and consists in the production of oil and rope from the kernel and the husk of the cocoa-nut. The value and consumption of both these articles have risen considerably at home of late years, and have held out additional inducements to the indolent native to exert himself in their cultivation and manufacture.

Contributions to the Economical Statistics of Birmingham. By a local Sub-Committee.*

[Read before the Statistical Section of the British Association, 29th August, 1839.]

In illustration of the Commercial Statistics of the borough of Birmingham, we have the pleasure to lay before this Section:—

1. A Return from the Savings* Bank, from its Establishment in 1827 to the present time.
2. A Return of the Quantity of Silver and Gold Manufactures assayed and marked, or cut as impure, at the Birmingham Assay Office, from its establishment in 1773.
3. A classified Return of the Expenditure at the Birmingham Workhouse, with the average Number of Cases of In and Out-poor in each Year, from 1822 to 1838.
4. A Return of the Assessed Taxes collected in Birmingham; showing the Number of Objects assessed, and the amount of Duty received in each year, from 1817 to 1838.
5. A Return of the Steam-power employed in the Borough of Birmingham, from the Year 1774 to 1838.
6. A Return of the Occupations of 791 Members of a Provident Institution; and
7. A Return of the Weekly Wages of 662 Mechanics in Birmingham.

As some of these Papers hardly possess sufficient general interest to justify our addressing an assemblage like the present, on the subjects to which they refer, we propose to confine our observations to the last three of these Returns, having first disposed of the other four by a brief reference to their contents.†

* See p. 290.

† For the same reason, and on account of the voluminous nature of some of these

1. *The Savings' Bank.**—This Institution was established in the year 1827; nine years later than the period at which many others had been established in various parts of the country.

Its progress has been as follows:—

In the year ending Nov. 28th, 1827, 980 accounts were opened, 33 closed, and 2,337 deposits made, amounting to £10,612.

In 1832, 688 accounts were opened, 1,056 closed, and 4,428 deposits made, amounting to £21,551.

In 1838, 1,597 accounts were opened, 464 closed, and 9,136 deposits made, amounting to £47,362.

In 1827,—	£.	s.	d.	£
The average of each deposit was 4	10	9		and the total balance invested 10,299
In 1832,—				
,, ,,	4	17	4	,, ,, 49,063
In 1838,—				
,, ,,	5	3	8	,, ,, 134,525

The amount of the various accounts has been gradually improving in the meantime, viz.—

In 1827,—	Depositors.	£.	£.	£.	£.
There were 706	under 20;	236	under 50;	3	under 100; and none above 100.
In 1832,—					
,, 2,066	,, 20;	621	,, 50;	190	,, ; 55 ,, ,,
In 1838,—					
,, 5,223	,, 20;	1,535	,, 50;	512	,, ; 176 ,, ,,

But it is worthy of remark, that the average amount due to each depositor, which in 1827 was 10*l.* 16*s.* 9*d.*, in 1832 was 16*l.* 15*s.*, and in 1838 was 17*l.* 17*s.*, is much less than in other large towns.

2. *The Assay Office.†*—This office was first opened in the year 1773, for the assaying and marking of silver goods. In 1825, by a new Act of Parliament, the privilege was extended to the assaying and marking of gold. The total weight of silver and gold assayed has been 4,011,997 ounces of silver, and 17,584 ounces of gold; the duty paid has been 105,851*l.* Of the silver articles, 27,167 ounces, or 1 in 148, have been cut as impure, and 330 ounces of gold, or 1 in 53 ounces. While the average has been as thus stated, in the year 1827, 1 ounce of silver in 64 was cut, and in 1786 only 1 ounce in 4,419; in gold articles also, while 1 ounce in 19 was cut in 1827, in 1832 only 1 in 253 shared that fate. Of the progress of these trades in the Borough, the following statement will supply a satisfactory view:—

In 1773-4, the amount of silver assayed was 16,983 ounces.	
1800-1, ,, ,, ,,	37,473 ,, ,,
1820-1, ,, ,, ,,	55,392 ,, ,,
1838-9, ,, ,, ,,	114,500 ,, ,,
1824-5, ,, gold ,,	22 ,, ,,
1838-9, ,, ,, ,,	2,125 ,, ,,

3. *The Birmingham Workhouse.‡*—This Return is complete for 19

documents, abstracts only of some are inserted in the Journal. The originals are preserved in the library of the Statistical Society, and may be referred to by any person desirous of further information respecting them.

* For an abstract of these two tables, see p. 438.

† This table is inserted at length, with the exception of the amount of duty, at p. 438.

‡ An abstract of this table is inserted at p. 439.

years, from Lady-day 1820 to 1839, in which period the population of the parish has risen from 85,416 to about 140,000, which is the present estimate. It exhibits the nature and amount of the expenditure, the number of paupers, and the produce of labour in each year.

In the year ending Lady-day 1820,—

The total expenditure was £57,790, and the number of paupers, 9,014			
In 1830	„	51,255	8,394
In 1839	„	46,710	5,818

The highest payments were for the year ending 1833, when the expenditure reached 66,040*l.* and the average number of paupers, 10,222. The workhouse is managed by a Board of Guardians, under a local Act.

4. *Assessed Taxes.*—This Return of the amount collected in Birmingham in each year, from 1816 to 1838, is arranged under the various heads of Windows, Houses, Servants, Carriages, Horses, &c., &c.; and shows a marked improvement in the state of the town.

In the year ending April 1817,—

The window duty produced £14,349, and the house-tax, £8,536

In the year ending April 1822,—

The window duty produced £15,456 „ £9,912;

and in the mean time, the total taxes received had risen from 35,922*l.* to 39,264*l.*

In 1822 one half of the window-tax was remitted, and the receipts in 1823 consequently fell to 7,717*l.* Since that time they have gradually increased, and in 1838 they amounted to 8,768*l.* In 1816 the number of carriages assessed was 404, producing about 3,000*l.*; ten years afterwards, the number was 697, producing, at a reduced duty, 2,875*l.*; and in 1838 the number was 917, producing 3,222*l.*

The total amount of taxes collected in 1816 was about 36,000*l.*, and the sum paid in 1838, if calculated at the same rate, would have been considerably more than 50,000*l.*

5. *The Steam-power of Birmingham.**—This Table shows the number of steam-engines at work, with the power in horses, the uses to which they are applied, and the date of erection in each year from 1780, when the first engine was set to work.

From 1780 to 1815, a period of 35 years, there were only 42 engines set to work. The total number now at work is 240; of these, therefore, 198 have been added since 1815, and 120 of the 198 have been erected since 1830. Of the total number of engines, 65 only are high pressure.

The total steam-power in horses now at work is 3,436; of which 530 horses-power is let to out-workers. The estimated consumption of coals is 240 tons per day, and the number of persons employed, as nearly as could be ascertained, is 5,200 males, and 1,762 females.

The metal trades of the town employ 2,155 horses-power, and though it would be hardly possible to ascertain with accuracy the amount of power consumed in each separate operation, the following analysis may be considered as a near approximation to the truth :—

* This table is inserted at p. 440. For a table of the steam-power existing in Manchester and Salford, see p. 280.

210 horses-power; employed by iron founders, engineers, and smiths; and steam first applied to these purposes in . . .				1788
650	„	„	in Rolling metals, and first applied	1790
170	„	„	Drawing wire, „	1808
201	„	„	Iron forges, and wrought iron mills, and first applied . . .	1810
78	„	„	Nail cutting, „	1813
122	„	„	Wood screw making „	1819

6. *Return of Occupations.*—It is hoped this paper will afford some insight into the multifarious branches of Birmingham manufacture. The degree to which the division of labour is carried in this town is however but slightly indicated by this table, although not less than 78 different employments connected with the manufacture of hardwares are enumerated in it. In almost every branch of manufacture, some of the processes are carried on at the houses of out-workers; thus almost indefinitely multiplying the variety of designations of the different workmen, and rendering it extremely improbable we shall ever obtain any trustworthy return of their occupations, except by a carefully conducted inquiry from house to house by a paid agent. Of the 791 persons whose occupations are indicated in this return, by far the largest proportion are boys and girls, viz. 557 boys, 117 girls, 66 men, and 51 women. Of these, 138 children and 10 women, or about 20 per cent. of the whole number, are not employed in any shop: the children being generally too young, and the women being engaged in domestic duties. Thirty-three per cent. are workers in brass and copper; 11 per cent. workers in iron; 5 per cent. gun and pistol makers; 4 per cent. workers in gold and silver; $1\frac{1}{2}$ per cent. glass-cutters, and the remainder are employed in sundry occupations.

7. *Weekly Wages of Mechanics.**—Of the wages of the mechanics of Birmingham, the table now presented will perhaps give a fair average.

These are not selected cases, but principally taken from the declaration book of a Provident Institution; 479 of the 662 cases being so obtained, and the remaining 183 from private inquiry. It is true that the applicants for admission into this Provident Institution (who declare their weekly wages, under pain of forfeiture of its advantages if they falsify the amount) may be deemed some of the more respectable of the working classes; but yet the low amount of wages reported in many instances, and the fact of none being inserted in the table of a greater amount than 40s. per week, justify the conclusion that the return gives an accurate average of the weekly wages of the Birmingham mechanics. From this document it appears, that the average wages of children between the ages of 7 and 13, are 3s. 1d. per week for boys, and 2s. 4d. per week for girls: from 14 to 20, the averages are 5s. 9d. for males, and 5s. 2d. per week for females. For adults, the averages are 24s. 3d. for men, and 8s. for females. It should be mentioned, that the 479 cases alluded to form part of the individuals returned in the preceding table, and are therefore divided among at least 100 occupations. This affords an additional reason for the conclusion that the averages may be taken as a near approximation to a correct return.

* This table is inserted at p. 441.

No. I.—A Return from the Birmingham Savings' Bank from its Establishment in 1827 to 1838.

Years.	No. of Accounts.		Deposits.			Repayments.			Average Amount due to each Depositor.
	Opened.	Closed.	No.	Total Amount.	Average Amount.	No.	Total Amount with Interest.	Average Amount.	Total Balance Invested
			No.	£	£ s. d.	No.	£	£ s. d.	£
1827	980	33	2,337	10,612	4 10 9	54	345	6 8 1	10,299
1828	1,219	273	5,362	24,383	4 10 11	638	5,188	8 2 7	30,060
1829	978	372	7,496	25,767	3 8 9	1,327	13,313	10 0 0	43,741
1830	965	323	5,635	26,989	4 15 9	1,448	14,219	9 16 4	58,885
1831	961	767	6,012	26,495	4 8 1	2,020	26,611	13 3 5	58,295
1832	688	1,056	4,428	21,551	4 17 4	2,368	34,022	14 7 4	49,063
1833	861	239	5,283	25,763	4 17 6	1,290	14,475	11 4 5	62,123
1834	1,181	297	7,119	33,937	4 15 4	1,707	20,215	11 16 10	78,000
1835	1,184	463	8,167	36,904	4 10 4	2,042	23,613	11 11 3	91,029
1836	1,526	515	9,486	45,410	4 15 6	2,281	26,582	11 13 0	117,163
1837	1,212	1,060	7,176	39,226	5 9 3	3,225	43,162	13 7 8	116,149
1838	1,597	464	9,136	47,362	5 3 8	3,002	33,227	11 1 4	134,525

No. II.—A Statement of the Quantities of Silver and Gold Assayed and Marked, or Cut as below the Standard, at the Birmingham Assay Office, in each Year, from its Establishment in 1773 to 1839.

Years ended June	Silver.		Years ended June	Silver.		Years ended June	Silver.	
	Marked.	Cut.		Marked.	Cut.		Marked.	Cut.
	oz.	oz.		oz.	oz.		oz.	oz.
1774	16,983	257	1791	21,280	62	1808	86,653	127
1775	21,197	316	1792	25,624	147	1809	83,265	94
1776	34,673	357	1793	26,304	118	1810	98,724	156
1777	55,789	502	1794	24,001	191	1811	105,452	313
1778	56,933	189	1795	21,375	116	1812	85,508	379
1779	61,220	722	1796	22,852	129	1813	78,753	904
1780	47,415	722	1797	22,653	181	1814	96,520	599
1781	39,375	628	1798	17,145	61	1815	101,060	1,428
1782	21,806	118	1799	22,825	104	1816	90,207	415
1783	19,288	65	1800	19,037	91	1817	56,110	650
1784	19,381	116	1801	37,473	126	1818	81,731	565
1785	15,282	84	1802	42,754	124	1819	96,626	315
1786	13,257	3	1803	52,646	192	1820	57,423	325
1787	14,789	47	1804	42,185	83	1821	55,392	152
1788	13,531	..	1805	58,879	70	1822	66,324	813
1789	14,046	..	1806	76,241	196	1823	65,473	720
1790	19,250	..	1807	77,968	1,124	1824	87,679	715

Years ended June.	Silver.		Gold.		Years ended June	Silver.		Gold.	
	Marked.	Cut.	Marked.	Cut.		Marked.	Cut.	Marked.	Cut.
	oz.	oz.	oz.	oz.		oz.	oz.	oz.	oz.
1825	111,643	168	770	22	1834	101,750	372	1,084	20
1826	103,675	620	760	28	1835	101,761	760	1,118	20
1827	87,200	1,350	700	36	1836	121,361	240	1,792	48
1828	105,351	1,230	1,190	23	1837	109,893	310	2,015	15
1829	104,811	1,190	888	31	1838	90,958	490	1,988	17
1830	88,973	1,000	858	7	1839	114,500	606	2,125	16
1831	97,716	1,160	779	16					
1832	95,420	900	760	3					
1833	86,632	830	757	28	Total	4,011,997	27,167	17,584	330

The duty upon silver plate, when first charged, was *6d.* per oz.; it was afterwards raised to *1s.* and *1s. 3d.*, and lastly in 1816, to its present rate, *1s. 6d.* The manufacturer is allowed one-sixth from the gross weight, the articles being sent to the office in an unfinished state; therefore only *1s. 3d.* is paid on the gross weight. No duty is charged upon either silver or gold watch cases. The watch cases sent from Coventry to the Birmingham assay office are included in the above statement, and may amount to rather more than one-third of the whole weight.

The duty upon gold plate is *17s.* per oz. The same allowance is made as upon silver plate. Gold watch cases bear a very small proportion to the other gold articles stamped, which consist principally of wedding rings. Of these 25,000 were assayed in the year 1838-9, at this office.

No. III.—Analysis of the Workhouse Accounts for the Parish of Birmingham, in the years ended Lady-Day 1820, 1830, and 1839.

	1820	1830	1839	Years.	Total No. of Persons relieved.	Total Expendi- ture.
EXPENSES.	£.	£.	£.			£.
Out-Poor	32,560	23,286	20,433	1820	9014	57,790
In-Poor	10,707	7,143	5,466	1821	—	—
Asylum	2,395	2,199	1,827	1822	7,548	47,068
Employment	474	2,990	2,347	1823	6,035	36,152
Pensioners	122	4,252	3,500	1824	5,870	37,311
Medical	541	1,031	1,152	1825	5,907	39,976
Lunatics	966	864	332	1826	5,967	41,042
Bastardy	—	—	561	1827	6,928	47,477
Salaries	1,392	1,942	1,915	1828	7,421	47,245
County Rate	4,364	3,990	3,788	1829	7,709	48,175
Constables, &c.	1,324	1,961	630	1830	8,394	51,255
Law and Parliamentary	1,010	592	785	1831	8,667	52,393
Miscellaneous	1,935	1,005	3,974	1832	8,687	57,273
Total	57,790	51,255	46,710	1833	10,222	66,040
PERSONS RELIEVED.				1834	9,127	56,685
Out-Cases	3,777	3,567	2,407	1835	8,541	49,733
In-Cases	598	3,491	434	1836	7,244	46,132
Asylum	390	324	Say 270	1837	5,941	38,058
Total. { $\frac{2}{3}$ to each } { out-case }	9,014	8,394	5,818	1838	6,706	50,475
PRODUCE OF LABOUR.				1839	5,818	46,710
Land and Farm	22	1,316	1,184			
In-Poor	151	—	8			
Asylum	—	551	81			
Breaking Stones	—	500	3,248			
Total	173	2,367	4,521			

TABLE IV.—Steam Engines in the Borough of Birmingham up to December 1838.

Period of Erection.	Engines.		Grinding Flour.	Working Metals.	Glass Works.	Wool Sawing, &c.	Paper Making and Working.	Colours, Chemicals, &c.	Clay Grinding.	Pumping.	Sundries.	Void and Removed.	High Pressure Engines, included in first and second Columns.	
	No.	Horse Power.											No.	Power
1780	1	14	..	..	..	..	..	..	..	..	..	14	..	..
1783	1	25	25	..	..	..	..	..	..	..	..	..	..	..
1787	1	18	..	..	..	..	..	..	..	..	..	..	..	..
1788	1	18	..	..	..	..	..	..	..	..	..	18	..	..
1791	1	14	..	..	..	..	..	..	..	..	..	14	..	..
1792	1	16	..	16	..	..	..	..	..	..	..	..	..	..
1796	2	70	..	24	..	..	..	..	..	46	..	..	..	..
1797	1	24	24	..	..	..	..	..	..	..	..	..	..	..
1798	1	4	..	..	..	..	..	..	..	..	..	4	..	..
1800	1	60	..	60	..	..	..	..	..	..	..	..	..	..
1803	4	184	24	160	..	..	..	..	..	..	..	..	..	..
1804	1	30	..	30	..	..	..	..	..	..	..	..	..	..
1806	1	30	..	30	..	..	..	..	..	..	..	..	..	..
1807	3	151	..	97	4	..	..	..	..	..	..	50	1	4
1808	2	36	..	30	..	..	..	..	..	..	6	..	..	..
1809	4	89	..	83	..	6	..	..	..	..	..	..	1	6
1810	3	18	..	18	..	..	..	..	..	..	..	..	..	..
1811	3	33	..	28	..	..	..	..	5	..	..	..	..	..
1812	3	39	..	39	..	..	..	..	..	..	..	..	1	6
1813	5	82	28	54	..	..	..	..	..	..	..	..	..	..
1814	2	42	..	26	..	16	..	..	..	..	..	..	..	..
1815	1	3	..	..	..	..	..	..	..	3	..	..	..	..
1816	10	101	..	53	..	3	20	..	..	25	..	..	..	..
1817	1	8	..	8	..	..	..	..	..	..	..	..	..	..
1818	3	28	18	4	6	..	..	..	..	..	..	..	..	..
1819	4	67	17	46	4	..	..	..	..	..	..	..	..	..
1820	5	58	16	13	..	..	..	13	..	..	..	16	..	..
1821	3	55	..	55	..	..	..	..	..	..	..	..	..	..
1822	4	62	..	48	4	..	..	10	..	..	..	..	..	..
1823	2	14	..	..	..	..	14	..	..	..	..	..	..	..
1824	7	103	21	62	8	12	..	..	..	..	..	..	..	..
1825	6	149	..	142	..	7	..	..	..	..	..	..	..	..
1826	13	162	12	93	16	13	..	12	..	..	16	..	..	..
1827	6	164	8	150	..	..	..	..	..	..	6	..	..	..
1828	3	30	..	20	6	..	4	..	..	..	..	..	..	..
1829	5	45	..	22	4	9	..	4	6	..	..	..	..	..
1830	5	53	..	50	..	..	..	..	..	..	3	..	..	..
1831	7	90	40	18	..	12	..	17	..	3	..	..	..	..
1832	12	325	..	65	13	..	6	..	12	200	4	25	..	..
1833	9	61	24	29	..	..	..	4	..	..	4	..	..	..
1834	17	157	..	113	4	22	..	..	6	..	12	..	7	35
1835	24	217	..	159	18	12	..	3	8	..	17	..	13	78
1836	21	274	..	76	..	24	..	..	6	162	6	..	18	97
1837	12	96	..	70	4	..	16	..	..	..	6	..	10	66
1838	18	276	..	164	4	16	..	65	..	..	27	..	14	157
At Work in Dec. 1-38.	240	3595	257	2155	95	152	60	128	38	114	107	159	65	449

Estimated Consumption of Coal by the above Engines, 240 tons per day.

Estimated number of Persons employed—Males, 5200; Females, 1762.

Estimated amount of Power hired out, 530 horses.

No. V.—Return of the Average weekly Wages of 662 of the Working Classes of the Borough of Birmingham.

FEMALES.									
Age.	Number of Individuals.	Weekly Wages.			Number of Individuals.	Weekly Wages.			£. s. d.
		Average.	Lowest.	Highest.		Average.	Lowest.	Highest.	
7	1	£. s. d.	£. s. d.	£. s. d.	7	£. s. d.	£. s. d.	£. s. d.	£. s. d.
8	2	0 0 6	0 0 6	0 0 6	8	0 0 6	0 0 6	0 0 6	£. s. d.
9	2	0 1 6	0 1 6	0 1 6	9	0 1 6	0 1 6	0 1 6	£. s. d.
10	2	0 1 6	0 1 6	0 1 6	10	0 2 0	0 2 0	0 2 0	£. s. d.
11	9	0 2 4	0 1 9	0 3 0	11	0 2 4	0 1 9	0 3 0	£. s. d.
12	10	0 2 5	0 1 9	0 4 0	12	0 2 5	0 1 9	0 4 0	£. s. d.
13	8	0 3 3	0 2 0	0 4 0	13	0 3 3	0 2 0	0 4 0	£. s. d.
Total . .	34	0 2 4	Aggregate wages . .	4 1 8	Total . .	0 2 4	Aggregate wages . .	4 1 8	£. s. d.
14	10	0 3 10	0 2 6	0 5 0	14	0 3 10	0 2 6	0 5 0	£. s. d.
15	5	0 4 2	0 3 0	0 5 0	15	0 4 2	0 3 0	0 5 0	£. s. d.
16	4	0 5 3	0 4 6	0 6 0	16	0 5 3	0 4 6	0 6 0	£. s. d.
17	8	0 5 5	0 4 6	0 6 6	17	0 5 5	0 4 6	0 6 6	£. s. d.
18	8	0 5 11	0 2 6	0 6 6	18	0 5 11	0 2 6	0 6 6	£. s. d.
19	8	0 5 10	0 4 0	0 8 0	19	0 5 10	0 4 0	0 8 0	£. s. d.
20	8	0 6 6	0 4 0	0 7 6	20	0 6 6	0 4 0	0 7 6	£. s. d.
Total . .	51	0 5 2	Aggregate wages . .	13 3 6	Total . .	0 5 2	Aggregate wages . .	13 3 6	£. s. d.
21 to 25	27	0 7 4	0 3 0	0 12 0	21 to 25	0 7 4	0 3 0	0 12 0	£. s. d.
26 to 30	13	0 8 2	0 7 0	0 14 0	26 to 30	0 8 2	0 7 0	0 14 0	£. s. d.
31 to 40	12	0 8 7	0 6 0	0 11 0	31 to 40	0 8 7	0 6 0	0 11 0	£. s. d.
41 to 50	9	0 8 8½	0 6 0	0 14 0	41 to 50	0 8 8½	0 6 0	0 14 0	£. s. d.
51 to 60	2	0 7 6	0 5 0	0 10 0	51 to 60	0 7 6	0 5 0	0 10 0	£. s. d.
61 to 70	2	0 7 6	0 5 0	0 10 0	61 to 70	0 7 6	0 5 0	0 10 0	£. s. d.
Total . .	63	0 7 11	Aggregate wages . .	25 0 6½	Total . .	0 7 11	Aggregate wages . .	25 0 6½	£. s. d.
Total of ages .	118	Females.	Aggregate wages . .	42 5 8½	Total of ages .	118	Females.	Aggregate wages . .	42 5 8½

OF THE 662 cases above stated, 479 were extracted from the Declaration Book of the New Meeting, Provident Institution in Birmingham; by the rules of which it is required that, on application for admission, the party shall declare his age, occupation, and weekly wages, and these are entered in a book kept for that purpose. The remaining 183 cases have been obtained by private inquiry.

Social and Moral Statistics of Criminal Offenders.

[Read before the Statistical Society of London, 16th December, 1839.]

It was stated in a former number of the Journal, that the Rev. Mr. Clay, chaplain to the Preston House of Correction, whose valuable reports have been on more than one occasion brought before the Statistical Society of London,* had adopted the forms recommended by the Society for the collection of information relating to the social and moral condition of criminal offenders.† In the last report of that gentleman, dated October, 1839, the results of his inquiries into these particulars during part of the past year, are stated in a table, of which the following is an abstract, omitting only the age of the offenders.

Total number of offenders						Males.	Females.
						208	62
1. Parentage, viz.	Legitimate	.	.	.	.	194	57
	Illegitimate	.	.	.	.	14	5
	Only one parent or step parent (children)	.	.	.	.	11	..
	Orphans	.	.	.	Ditto	7	..
2. Education, viz.	Cannot read	.	.	.	.	131	45
	Read only	.	.	.	.	31	10
	Read, and write ill	.	.	.	.	38	6
	Read, and write well	.	.	.	.	8	1
3. Religion, viz.	Quite ignorant	.	.	.	.	68	14
	Ill instructed	.	.	.	.	131	46
	Well instructed.	.	.	.	.	9	2
4. Domestic condition, viz.	Married	.	.	.	.	66	23
	Single	.	.	.	.	131	29
	Widowed.	.	.	.	.	11	10
	Illicit cohabitation	.	.	.	.	..	2
	No. of children: Legitimate	.	.	.	.	231	105
	„ Illegitimate	.	.	.	.	8	9
5. Previous character, viz.	Sober	.	.	.	.	104	45
	Drunken	.	.	.	.	104	17
	Industrious	.	.	.	.	95	32
	Idle	.	.	.	.	113	30
	Orderly	.	.	.	.	83	29
	Vicious	.	.	.	.	125	33
6. Number of convictions, viz.	First	.	.	.	.	165	53
	Second	.	.	.	.	35	8
	Third	.	.	.	.	8	1
	Fourth	.	.	.	.	2	..
7. Inducements to offence, viz.	Desire of gain, profligacy	.	.	.	.	165	49
	„ distress	.	.	.	.	24	12
	Wantonness	.	.	.	.	14	1
	Sexual desire	.	.	.	.	1	..
	Malice	.	.	.	.	1	..
	Passion	.	.	.	.	1	..
	Unknown.	.	.	.	.	2	..

* Proceedings, p. 246. Journal, vol. ii. p. 84.

† Journal, vol. i. p. 177.

8. Proximate cause of offence, viz.				Males.	Females.
Intoxication of offender	.	.	.	80	12
,, offended person	.	.	.	5	3
,, both	.	.	.	3	1
Temptation	.	.	.	66	32
Profligacy	.	.	.	54	14
				<hr/>	
9. Belonging to benefit societies	.	.	.	21	..
10. Unemployed	.	.	.	65	19

In two other columns are exhibited the average weekly earnings, usual and actual, of those prisoners who were employed. These, with the above last two heads, have been added by Mr. Clay.

The following remarks will be useful in explanation of the above table, and may serve to guide persons disposed to imitate Mr. Clay's praiseworthy example, by collecting similar information in other gaols.* In definition of the religious state of the criminals, if the prisoner could repeat the Lord's prayer, he was asked if he knew *who* was meant by "Our Father" &c.; and if after patient inquiry and putting the question in other terms, he was found incapable of answering it, he was classed as "quite ignorant" with those who could not repeat the words of the prayer. If the prisoner could answer it satisfactorily, the inquiries were extended further, and he was classed as "ill instructed" or "well instructed" according to circumstances.

The chaplain of the Lewes gaol, referred to in the preceding note, has adopted a different standard of religious knowledge. The results which he has given are interesting, as showing the influence of that knowledge, and the advantages of secular instruction as a means of obtaining it.

Out of 846 prisoners, the number who could repeat—

The Lord's Prayer, Creed, and Ten Commandments, was	129
The Lord's Prayer and Creed; miscalling the words in most cases,	415
The Lord's Prayer; Ditto	227
The number who could not repeat any of the three was	75
<hr/>	
Total	846

This test, however, is by no means a sufficient criterion of religious information, as five-sixths of those who can repeat the words do not understand their meaning: in order, therefore, to ascertain the real condition of the prisoners in this respect, Mr. Burnet wrote down a few simple questions, and put them to each individual the day after his committal. The first of them are of this nature: "Who is our Saviour; who died for sinners? How did Jesus Christ die? Who made all things? Who were the first man and woman? What does the Holy Ghost do for us?" In cases in which, after changing the form of the questions, no answer could be given, he placed the individual in the first class, as wholly ignorant. When the topics of the first four questions seemed barely to be known, the individual was placed in the second class, as knowing little more than the Saviour's name. When the prisoner was acquainted with the simple facts of the Saviour's his-

* Mr. Clay has already found one able imitator in the Rev. Richard Burnet, the newly appointed chaplain to the House of Correction at Lewes, whose Report for the last year is very well drawn up and full of interest.

tory, he was placed in a third and higher class. The fourth and highest class contained those who showed that knowledge of simple Christian doctrine, which might reasonably be expected of a labouring man who paid any attention to religion. In order to meet the objection, that the ignorance exhibited is only apparent, and arises from shyness and inability to answer questions, however simply put, Mr. Burnet states, that whenever, from subsequent interviews and catechising, he found reason to change his first opinion, he changed his note accordingly. The results are as follows:—

	Males.	Fems.
The number who were wholly ignorant was	267	27
„ „ knew little more than the Saviour's name	413	77
„ „ knew something of his history	43	11
„ „ had any idea of Christian doctrine	7	1
Total	730	116

The following table shows the degree in which the ability to read and write coexisted with the religious information of the same persons, and affords the strongest evidence that, although instruction in reading and writing does not constitute education or religious knowledge, yet that such knowledge is not likely to exist among those who are destitute of the most obvious and readiest means of acquiring it. All the prisoners who had any idea of Christian doctrine could read and write well, and out of the 541 who could not read, so as to gain any information by it, only 5 could be said to know anything of Christianity, or to possess any religious knowledge. It also proves the efficacy of religious knowledge in restraining persons from crime, as it would be too dreadful to suppose that in this country the proportion of persons possessing even a superficial knowledge of their religious belief to the whole community, is the same as that borne by the well instructed prisoners to the total number, or only 1 in 105.

	Acquainted with Christian Doctrine.	Acquainted with the History of the Saviour.	Scarcely acquainted with the Saviour's Name.	Wholly ignorant of Religion.	Total.
Read and write well	8	12	28	—	48
Read well, and write a little	—	37	185	35	257
Read imperfectly	—	2	169	71	242
Neither read nor write.	—	3	108	188	299
Total	8	54	490	294	846

The heading “previous character” should be considered in connexion with certain modifications: sobriety and drunkenness, industry and idleness, must be taken comparatively. Mr. Clay called those prisoners sober who satisfied him that they had not been intoxicated more than once a-month. Delinquents will readily admit the particular instances of drunkenness which may have been the “proximate cause” of their

offences, but they are by no means so willing to allow that they are habitually or frequently drunkards. Many a man has denied that he was addicted to liquor, who, nevertheless, admitted that he spent one-fourth, or one-third, of his wages in the public-house. Again, as to the general character of a culprit being "orderly" or "vicious," it may well be imagined that there are few or none among them who could be regarded as orderly characters, if measured by those who are truly regular and respectable; but some, having hitherto escaped any criminal charge, and having been usually employed in a lawful trade, may be looked upon more favourably, in comparison with those who have become familiar with crime.

With reference to the headings "Inducements to offence" and "Proximate causes of offence," Mr. Clay remarks that the *remote* origin of crime is not here brought into view; that the bad habit as well as the criminal act must have had a cause; and that profligacy, wantonness, unbridled passions, &c., evils in themselves, must have sprung from other evils. It is almost unnecessary, he adds, to say that such is the case; and that parental ignorance, neglect or vice, and want of religious training, are the chief origin not only of the depravity, but also of the distress which induces to crime. This is true, and it was on this account that the framers of the forms made these circumstances the first and principal objects of their inquiry, tracing the life of the prisoner upwards until the commission of the offence, when the motives which led to the act indicate the effects of the previous social and religious training of the prisoner.

The extensive influence of parental vice is placed in a striking point of view by the results of the head "Domestic condition;" 110 married and widowed persons are there shown to have 336 legitimate children. If to these be added the children of persons convicted summarily and at the sessions of October, 1838, not included in the above, viz., 1,147 children of 377 prisoners, there were 1,500 children of prisoners convicted in one year at these assizes alone, who must have been more or less familiarized with vice by the example of their parents, and who, in many instances, must have been in destitution or distress through their imprisonment.

The fact that, out of 270 criminals, only 84 were unemployed at the time of committing the offence for which they were imprisoned, while of these many had been out of work only a few days; and the amount of the average weekly earnings of those in employment, as stated in Mr. Clay's Report, show that distress and destitution are answerable for crime to a comparatively slight extent. Improvidence, intoxication, and habits allied to these, are much more productive of both evils.

It is probable that Mr. Burnet will adopt the Society's forms of registry, and thus afford the means of a very interesting comparison between the manufacturing district surrounding Preston and the agricultural county of Sussex.

R.

On the Sulphur Trade of Sicily, and the Commercial Relations between that Country and Great Britain.

SIXTEEN months have elapsed since the commerce between this country and Sicily has been paralysed by the establishment of a monopoly of the sulphur trade in the latter island by the Sicilian Government. The effects of this measure may be estimated by the fact, that while 40,740 tons of sulphur were imported into the United Kingdom in 1837, and 44,653 tons in 1838, only 22,160 tons were imported during the year ended 10th October, 1839, and of this quantity no more than 5,400 tons were brought direct from Sicily, although previously almost the whole of the importations had been from that country. The price also which in 1836 and 1837 averaged 6*l.* 10*s.* or 7*l.* per ton, has risen to 13*l.* or 14*l.* per ton, an increase of 100 per cent. This check to the trade has already caused great inconvenience and loss to the parties engaged in the importation of sulphur, and to those who employ it or its products in large branches of manufacture; and these evils would have been greatly enhanced, if it had not happened that the stocks of sulphur both in this country and in France were very large at the time when the monopoly came into operation, as will be presently shown, so that hitherto the limitation of the supply has not been so much felt as the excessive rise in the price. At present, however, the stocks are nearly exhausted, the monopoly is still in force, and its full effects upon our commerce and manufactures are about to be realised, unless the efforts of our government prove speedily successful in obtaining its abolition.

The sulphur trade of Sicily is of great importance to this country. Sulphur is the base of oil of vitriol, and of almost all the acids and alkalis which are used so extensively in various manufacturing processes. Among the principal of these may be mentioned bleaching, and the discharging of colours in dyeing. It is also required for the manufacture of gunpowder, and for various medicinal and other useful purposes. The rapid increase of the quantities consumed in this country will be seen from the following statement of the quantities imported and entered for consumption in the United Kingdom since the year 1820.

SULPHUR TRADE OF THE UNITED KINGDOM.					
Years.	Imported.	Entered for Consumption.	Years.	Imported.	Entered for Consumption.
	Tons.	Tons.		Tons.	Tons.
1820	4,650	5,602	1830	12,136	13,221
1821	5,692	6,231	1831	14,472	14,804
1822	4,956	7,582	1832	17,077	16,465
1823	8,644	7,692	1833	20,487	19,082
1824	9,065	8,293	1834	25,390	22,178
1825	10,936	13,421	1835	30,720	30,838
1826	12,599	11,651	1836	33,358	25,692
1827	10,918	10,373	1837	40,740	37,486
1828	13,993	14,498	1838	44,653	33,978
1829	15,104	15,709			

From this it appears that the average consumption during the five years from 1820 to 1824 was 7,080 tons. In 1825, the duty was reduced from 15*l.* to 10*s.* a ton; in consequence of which the importation and consumption immediately increased, and during the subsequent ten years the latter averaged annually 15,140 tons, or double the quantity consumed during the previous period. During the last four years the increase was much more rapid, the annual consumption having again doubled, and averaging 32,000 tons. In 1837 it amounted to 37,486 tons. In France, also, the consumption has greatly increased, although not to the same extent. From 1825 to 1833 it remained nearly stationary, and averaged 11,844 tons; during the next five years to 1838 it averaged 18,625 tons, an increase of 57 per cent. The importation, however, greatly exceeded the consumption; in 1838 it amounted to 40,618 tons, or more than double the consumption; and consequently, at the close of the latter year, the stock in bond had accumulated to the amount of 27,495 tons, which was equal to eighteen months' consumption. The stock in bond in the United Kingdom was also large at the same time, and amounted, on the 10th of October of that year, to 20,349 tons, or about seven or eight months' consumption, exclusive of the quantities in the hands of dealers.

The following table furnishes a complete view of the trade of France in this article since 1825.

SULPHUR TRADE OF FRANCE.			
Years.	Imported.	Taken for Consumption.	In Bond on 31st December.
	Tons.	Tons.	Tons.
1825	13,597	10,359	5,635
1826	16,278	15,524	6,330
1827	13,595	12,546	5,929
1828	12,181	13,352	3,898
1829	12,712	10,423	4,062
1830	12,013	12,663	2,661
1831	8,572	8,574	720
1832	14,357	12,207	1,088
1833	14,180	10,948	4,131
1834	20,750	18,260	5,703
1835	21,263	18,253	7,427
1836	30,660	23,069	10,690
1837	19,758	15,338	10,772
1838	40,618	18,207	27,495

Sicily is the only country in which sulphur has hitherto been produced in sufficient quantities, and easily available for commercial purposes. It is known to exist in other parts of the world, in Iceland, Teneriffe, St. Vincent's, &c., but the expense of obtaining it from these places is so great as to have deterred parties from seeking it there while the trade with Sicily remained open. It may also be extracted from pyrites and from gypsum (plaster of Paris,) and there can be little doubt that, if the monopoly be maintained in Sicily, means will be adopted by the enterprising manufacturers of England to supply their wants from some of these sources. Already one cargo of sulphur has been im-

ported from Iceland, and has fetched, at the present rates, a remunerating price. Invention has also been busy to improve the processes by which sulphur may be extracted from the above-mentioned substances, and it has been found that it may be obtained in much larger quantities, and at a much smaller cost, than has hitherto been supposed. Nothing, therefore, can exceed the impolicy of the Sicilian government in establishing the existing monopoly: for not only has it checked the rapidly increasing consumption of England and France, which, as will be presently shown, are almost the sole consumers of Sicilian sulphur, but it threatens the total ruin of the trade of Sicily in that article, by the discovery of other sources of production, or of substitutes which will render the use of it unnecessary.

During the six years from 1833 to 1838, England took 49 per cent. of the whole quantity of sulphur exported from Sicily, and France 43 per cent., leaving only 8 per cent. to be distributed among all other countries, and part of this was shipped to Malta and destined for consumption in England. This is shown in the following Table, the Sicilian measure being converted at the rate of 13 cantars to one ton.

Years.	Sulphur exported from Sicily.				
	Great Britain.	France.	Malta.	Other Countries.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
1833	19,932	15,477	..	2,726	38,136
1834	26,324	22,832	..	2,874	52,047
1835	25,060	19,971	..	5,874	50,905
1836	35,200	24,937	..	5,659	65,798
1837	32,834	20,237	..	5,716	58,788
1838	28,872	36,161	9,221	3,559	77,814

The productive power of the Sicilian mines cannot be estimated very accurately. The average annual exportation, which is identical with the produce, of the last six years, was 57,245 tons, but an extraordinary stimulus existed during the last three years of this period; and it has been stated that, for the next seven years, with the usual mode of working the mines, it probably would not average more than 54,000 tons, although, if machinery were introduced, it might rise to 80,000 tons. The Sicilian government proposed to limit the exportation to 46,153 tons (600,000 cantars), which is less than the average consumption of England and France during the last five years, and wholly inadequate to meet the growing demand of those countries.

The price of sulphur in Sicily has undergone great fluctuations, and particularly within the last ten years.

		£. s. d.			per ton.
From 1808 to 1811 it averaged		4	6	0	
1812 — 1819	,,	6	2	0	,,
1820 — 1824	,,	4	5	0	,,
1825 — 1831	,,	3	0	0	,,
1832 — 1834	,,	7	19	0	,,
1835 and 1836	,,	4	14	0	,,
1837	,,	3	9	0	,,

These are the mean prices of second good sulphur, which is the average quality, free on board at Palermo, and are shown more in detail in the following Table.

Years.	Prices in Sicilian Tari per Cantar.	Prices in English Money per Ton. 58 Tari= £1.					Years.	Prices in Sicilian Tari per Cantar.	Prices in English Money per Ton. 58 Tari=£1.						
		£.	s.	d.	£.	s.	d.			£.	s.	d.	£.	s.	d.
1808	15 to 18	3	11	0	to 4	4	10	1823	16 to 18	3	15	8	to 4	4	10
1809	17 —18	4	0	3	—4	4	10	1824	15 —16	3	11	0	—3	15	8
1810	18 —20	4	4	10	—4	14	0	1825	12 —14	2	17	3	—3	6	5
1811	18½—22	4	7	2	—5	3	2	1826	11½—13	2	14	11	—3	1	10
1812	22 —24½	5	3	2	—5	14	6	1827	11½—13	2	14	11	—3	1	10
1813	26			6	1	7		1828	11½—13	2	14	11	—3	1	10
1814	21 —25	4	18	7	—5	17	0	1829	10½—12	2	10	4	—2	17	3
1815	21 —26	4	18	7	—6	1	7	1830	10½—13	2	9	2	—3	1	10
1816	26 —38	6	1	7	—8	16	11	1831	13½—18	3	4	1	—4	4	10
1817	27 —30	6	6	3	—7	0	1	1832	18 —38	4	4	10	—8	16	11
1818	27 —30	6	6	3	—7	0	1	1833	38 —45	8	16	11	—10	9	1
1819	24 —26	5	12	5	—6	1	7	1834	21 —45	4	18	7	—10	9	1
1820	19 —22	4	9	5	—5	3	2	1835	17 —23	4	0	3	—5	7	9
1821	18 —20½	4	4	10	—4	16	3	1836	16½—23	3	19	1	—5	7	9
1822	18 —19	4	4	10	—4	9	5	1837	13½—15½	3	4	2	—3	12	2

In 1832, when an increased demand for sulphur arose in England and France, a sudden rise of 163 per cent. took place in the price, and in the two following years the price reached the highest rate fixed under the monopoly, viz. 10*l.* 9*s.* This rise was followed by an excessive increase of production: certain parties, among whom were the projectors of the monopoly, speculated largely in the purchase of sulphur; the markets were overstocked, and the price fell again in 1835; but even in 1837 it had not reached the low average of the six years preceding 1832. It is stated that, in 1837, the consumption had again overtaken the production, and that prices must have been at the point of rising from natural causes, when they were forced up to the extent of 100 per cent. by the intelligence of a monopoly being projected.

The sulphur mines are the property of individuals; and it does not appear that any of them belong to the King of Naples, or that he ever derived any revenue from them. Previous to the establishment of the monopoly, there was no duty or restriction of any kind upon exportation. From 15 to 20 English Firms settled in Sicily were engaged in the sulphur trade. Some had purchased leases of mines, and invested capital in machinery and apparatus for working them, and about 30,000 tons of British shipping were annually employed in the commerce.

Such were the circumstances of the trade, when a project was presented to the Sicilian government in 1836, by M. Taix, a Frenchman, for establishing a company which was to have the exclusive right, during a period of ten years, of purchasing at fixed prices, and exporting whatever sulphur might be produced in Sicily, upon undertaking to spend 10,000*l.* a-year in constructing roads, and exporting one-third of the quantity produced in Sicilian vessels. It appears that M. Taix is a Carlist refugee, and a partisan of the Duchesse de Berri. He, and other

parties who supported him, had contracted to take a large quantity of sulphur, and having also large stocks on hand in France at the time when the prices fell, which they could neither sell at the reduced price nor hold any longer, had devised this expedient to save themselves from loss. The plan was supported by many Sicilian mine-owners, with the expectation of obtaining higher prices for their produce, and by other parties with a hope of obtaining shares in the speculation. The Sicilian government was doubtless attracted by the benefit which the scheme promised to confer on Sicily, and on the shipping of that country; and it is openly asserted that other and less creditable arguments were employed to obtain the favour of some of the members. The British merchants in Sicily, alarmed at this scheme, remonstrated against it through the British minister at Naples, and an assurance was given that no such project would be adopted. This answer was deemed satisfactory, and the matter rested until September, 1837, when the scheme being revived, further remonstrances were addressed to the Sicilian government, and repeatedly renewed, although with but partial success.

In order to understand the grounds upon which the objections of the British merchants rested, it will be necessary to show the footing upon which the commercial intercourse of the two countries exists. By the treaty of 1816, between Great Britain and the Two Sicilies, the subjects and commerce of each are placed on the footing of the most favoured nation in the country of the other. The two articles which bear upon the present question are the 4th and 5th, parts of which it will be desirable to quote here at length.

Art. 4. "His Majesty the King of the Two Sicilies promises that British commerce in general, and the British subjects who carry it on, shall be treated throughout his dominions upon the same footing as the most favoured nations, not only with respect to the persons and property of the said British subjects, but also with regard to every species of article in which they may traffic, and the taxes or other charges payable on the said articles or on the shipping in which the importations shall be made."

Art. 5. "With respect to the present privileges to be enjoyed by the subjects of His Britannic Majesty in the kingdom of the Two Sicilies, His Sicilian Majesty promises" (among other things) "that they shall be entitled to occupy dwellings and warehouses, and to dispose of their personal property of every kind and description, by sale, gift, exchange, or will, and in any other way whatever, without the smallest loss or hindrance being given them on that head. They shall not be obliged to pay, under any pretence whatever, other taxes or rates than those which are paid, or that hereafter may be paid, by the most favoured nations in the dominions of his said Sicilian Majesty."

To oblige, therefore, British merchants owning sulphur, or having mines producing sulphur, to sell their property to certain individuals, would be obviously a breach of the 5th Article of the treaty, as they would be hindered from disposing of their property according to their pleasure. The Sicilian government was, therefore, forced to modify their first project; but the prospect of immediate advantage to the revenue was so great, and the secret influence before alluded to was so irresistible, that, in spite of the urgent remonstrances of the British mer-

chants and of the representatives of Great Britain and France at Naples, and in contempt of the representations which were made of the serious evils which the measure would inevitably entail upon the mines and trade of Sicily, the negotiations with M. Taix were continued, and on the 4th July, 1838, notice of the conclusion of the contract was publicly given at Palermo, and the date of the monopoly coming into operation was fixed for the 1st of the ensuing August.

This contract is remarkable both for the nature of its provisions, and the secrecy with which it was negotiated. Its results, as were foretold, have been already most injurious to the commerce of Sicily, and threaten it, if the monopoly be maintained, with total ruin. The following is an outline of the principal provisions, with such observations as their perusal suggests:—The government of Naples enters into a contract with the firm of Messrs. Taix, Aycard, and Co. for the term of ten years, from the 1st August, 1838. The capital of the Company is to consist of 1,200,000 ducats (200,000*l.**), of which three-fourths are to be paid up before October, 1838, and one-fourth is to be offered to owners of mines and to Sicilian subjects. [The object of this appropriation of one-fourth was evidently to purchase the favour of interested parties, who might otherwise have opposed the measure.] The government on its side adds 600,000 ducats, or 100,000*l.* to the capital. Three Royal Commissioners are named by the King to represent the government in the enterprise, and to superintend the exact fulfilment of the contract. The previous annual exportation of sulphur being estimated at 900,000 cantars (69,230 tons), it is fixed that only two-thirds of that quantity shall in future be produced, lest the mines should be exhausted and the trade overstocked. [This was the ground upon which the monopoly was defended, but a subsequent clause in the contract anticipates and provides for an increased amount of exportation by securing one-third of the profits of such further sale to the government. So that, in fact, there is no real check upon the Company, as they are enabled to export as much as they can sell with profit, and it is the interest of the government, as well as of the Company, to abandon the grounds upon which it was attempted to justify the monopoly, and to push the trade to its utmost extent.] Compensation is to be made to the proprietors of mines for the quantity which they will not be allowed to raise, at the rate of four tari per cantar (15*s.* 2*d.* per ton), or 120,000 ducats upon 300,000 cantars. The annual produce of each mine is to be ascertained by the average of the four years from 1834 to 1837; or, if shut at present, by the produce of the last year in which it was worked. For one-third of this average the above compensation is to be paid by the company. [So that no allowance is made for the improvements introduced into the system of working the mines, or for the increased power created by the machinery recently erected, and all further extension of production is threatened to be stopped.] The remaining two-thirds may be sold to the Company, or exported at the pleasure of the owners. In the first case the Company is obliged to purchase all sulphur offered to them, to the extent of 600,000 cantars per annum, but at fixed prices varying from 21 to 25 tari, or carlini, per cantar, according to the quality, viz.—

* 5·85 ducats, or in round number 6 ducats, equal £1 sterling.

First quality of Talamone	25 carlini per cantar.
First quality of Licata	24 „
Second good ditto	23 „
Third ordinary ditto	22 „
Third good and third ordinary	21 „

paying for one half promptly, and for the other half by instalments. The Company must not demand more than 41 to 45 carlini per cantar, free on board, according to the same scale of quality. [This increase of price amounts to 80 a 95 per cent., without any advantage except to the monopolists.] If the owners prefer exporting their produce direct, they are obliged to pay 2 ducats per cantar, or 4*l.* 14*s.* per ton to the Company.

For these privileges the Company is to pay annually to the Government 400,000 ducats (68,000*l.*), and is obliged to pay to the proprietors of mines one-third in advance upon sulphur, for the delivery of which good security can be given. The Company further engages to establish, within four years, at its own expense, a manufactory of sulphuric acid, of sulphate of sode and of soda, and to employ and teach a certain number of Sicilian apprentices. On the other hand, the Government grants the title of "Royal" to the sulphur refinery of M. Taix at Girgenti, with permission to export 20,000 cantars of sublimed sulphur free of duty; for which further privilege M. Taix engages to supply the War and Marine departments with brimstone without charge.

Such are the provisions of this extraordinary contract, by which, in order to raise an annual revenue of 400,000 ducats, the Sicilian Government advances 600,000 ducats, and taxes its own commerce to the annual extent of three times the revenue received. For it was expected that the Company would derive at least as much profit from the sulphur which it purchased as from that which was exported direct, viz., 2 ducats per cantar; the total revenue, therefore, of the Company would, according to this calculation, be 1,200,000 ducats per annum, upon the limited produce of 600,000 cantars. The annual expenses were estimated at 400,000 ducats for the stipulated payment to the Government, 120,000 ducats as compensation to the mine-owners for the sulphur which they were prevented from raising, and 100,000 ducats for expenses of agents, &c.; making an aggregate of 620,000 ducats, which would leave a difference or profit of 580,000 ducats, or 96,000*l.* The other privileges of the Company might be balanced with their obligations. Thus, while the Government only received 400,000 ducats, the Company was to receive 520,000, and the trade was to be charged with 2 ducats per cantar, a sum equal to the cost price of the average quality of sulphur; whereas an export duty of two-thirds of a ducat would have yielded an equal revenue to the Government, even upon the limited produce of 600,000 cantars; and if the past produce of 900,000 cantars were maintained, a duty of half a ducat would have yielded a larger revenue.

But when the probable effects of the measure upon the commerce of Sicily itself be considered, together with its certain injury to that of Great Britain, whose intercourse with that country has been for some time upon a very extended footing, it is scarcely to be conceived how such a measure could have been adopted by the Sicilian Government. It is also a matter of just complaint, that no sufficient warning was given of the intended change. It appears to have been the design of

the Sicilian Government to take foreign merchants by surprise. The British and French ministers at Naples were kept in ignorance of the plan until it was officially published; they endeavoured in vain to procure an outline of it, when it was under the consideration of some members of the Sicilian Government. It was never brought before the Council of State, according to the usual course with respect to such measures; and those ministers who were opposed to the measure are stated to have been kept in ignorance of the proceedings of their colleagues. There was also a departure from the usual form in the published notice of the edict, and some inconsistencies of dates with regard to the King's sanction of the contract, which afford evidence of the unusual manner in which it was hurried forward. But more open steps were taken to prevent the exportation of sulphur during the interval between the publication of the notice and the time of the measure coming into operation. Orders were given at an unusual period to prevent the burning of sulphur at Girgenti, in consequence of which 24 vessels lost their cargoes. Another method adopted for the same purpose was the appointment of an officer to see that every cantar had its proper weight; by which means, if it had been persevered in, shipments would have been wholly stopped. This measure, however, the authorities were obliged to abandon.

The effects of this monopoly upon British commerce and the interests of British subjects have been very serious, and constitute, in several ways, a breach both of the letter and of the spirit of the treaty.

First. British lessees of mines have been prevented from working their mines beyond a certain limited extent, which has been calculated in a manner particularly unfavourable to all those mines in which improved methods of working and the use of machinery have been introduced. The value of their investments has therefore been destroyed, as their hope of future remuneration for their past outlay is rendered vain by the monopoly. This is clearly a breach of the fifth article of the treaty, which enacts that British subjects shall not be prevented from "disposing of their property by sale," or "in any other way, without the smallest loss or hindrance."

Secondly. The owners of mines and the holders of sulphur in Sicily are obliged either to sell their property to the Company at a fixed rate; or, if they prefer to export it themselves, they must pay to the Company an export duty of 2 ducats per cantar, which, as has been before stated, is nearly equal to 100 per cent. upon the cost price. It is calculated that the amount paid by the Company to the Government and to the mine-owners for its privileges is only 8½ carlini per cantar; therefore the duty of 2 ducats (20 carlini), which other parties must pay, is more than double that amount. Moreover the Government, acting by the Company, has the power of limiting the exportation of sulphur to 600,000 cantars per annum; so that when that amount has been exported in any year, the British merchant will have no power of disposing of his stock, not even to the Company, which is not obliged to purchase beyond the above amount. To compel British merchants to sell their property to the Company would obviously be a breach of the fifth article of the treaty already cited, and the Sicilian Government were aware of this, and therefore left an alternative, which cannot be said

to be a positive interference with the rights of property. But it imposes a higher tax upon sulphur thus exported direct than upon that exported by the Company, and therefore it may justly be asserted that British subjects are not "placed on the same footing as the most favoured nations" with regard to the taxes which they have to pay, as certain parties possess privileges from which they are altogether excluded.

The consequence of this impost, which, until the large stocks in France and England are exhausted, amounts to a prohibition upon exportation, has been to cause the severest distress in Sicily. The stocks of sulphur have accumulated to the extent of 600,000 cantars, the working of the mines has consequently ceased, and the whole population of the sulphur districts have been thrown out of employment. Multitudes of these have become desperate robbers, who have rendered the country so insecure that it has been necessary to place it under military law. Persons cannot travel without an escort, and the number of arrests and executions has continued very great up to a late period.

Thirdly. British owners of mines, holders of sulphur, and merchants in this country trading in sulphur, have been subjected to severe losses by the short notice which was given of the change, as in all cases of contract for future delivery, which is the usual practice in this trade, one of the parties has had to pay a ruinous duty wholly unforeseen at the time when the contract was arranged, or else to pay the penalty attached to a breach of contract. The publication of the edict took place on the 4th of July and it came into force upon the 1st of August following, so that there was no time to execute contracts made upon the island, still less to apprise merchants in England of the altered circumstances of the trade. The consequence was that very serious losses were incurred in this manner, and all redress was refused by the Sicilian government. The treaty does not provide for this case, but it is an infringement of the usage of nations, and an unjust act with regard to commerce, not to give sufficient notice of a change affecting foreign interests so seriously, and to admit of no relaxation in favour of existing contracts. On both points also it is contrary to precedent in Naples, when no unfair advantage was aimed at. In 1825, when the customs duties were altered, a notice of four months and a half was given; and in 1829, when the exportation of cork was prohibited, leave was given to complete an existing contract a considerable time after the prohibition came into operation.

Fourthly. British manufacturers have been injured by the scantiness of supply, which has enhanced prices to the extent of double their former amount; and which threaten, unless the monopoly be removed, to raise them to a ruinous height, or to force the adoption of substitutes, perhaps inferior in quality, and certainly much more costly in price. The tax upon British manufactures by the export duty alone amounts, upon the average consumption of the United Kingdom, estimated at 35,000 tons, to above 180,000*l*.

Fifthly. British shipping to a great extent has been thrown out of employment by the stoppage of the trade. This appears fully from a statement which has already been given to the public of the number of British ships that sailed from the ports of Sicily previous and subsequent to the establishment of the monopoly, and which is here inserted. The first column, A, contains the annual average number of British

ships which sailed from each port to the United Kingdom previous to 1838, and the second, B, contains the number which sailed during the fifteen months from the 1st of August, 1838, to the 7th of November, 1839, during the continuance of the monopoly :—

	A.	B.
Palermo	112	71
Messina	196	73
Catania	34	5
Gargenti	74	5
Licata	68	3
	<hr/> 484	<hr/> 157

The returns for the ports of Marsala, Trapani, and Terra Nova, are not given, but in the above five ports the difference amounts to 327 British ships, varying from 120 to 350 tons each, which have been driven out of the trade by the monopoly.

And lastly, British commerce is prejudiced by being placed upon a worse footing than that of other parties in the trade with Sicily, which is clearly against the spirit of the treaty.

It must not be supposed that the British merchants have passively submitted in silence to the evils thus inflicted upon them, nor that the British government has been remiss in endeavouring to obtain a removal of the monopoly, and redress for the injury already inflicted; nor could it be expected that a monopoly, so contrary to the most simple principles of commercial policy, and so unjust towards the parties most interested in the trade, could maintain itself. Within a very short time after its establishment, M. Taix applied to the Sicilian Government for a modification of his contract, which was refused; and it is understood that it has been found absolutely impossible for the Company to fulfil its obligations. But month after month has elapsed, and the monopoly still exists. It is stated, however, upon good authority, that the British Government have at length been successful in obtaining from the government of Sicily a formal pledge to abolish the monopoly at an early period, and to remove by a new treaty the differential duties imposed upon British navigation in the ports of Sicily. If this pledge be kept, the more serious evil which threatens our manufacturing interests will be averted, and it will only remain to obtain reparation from the Sicilian government for the losses already incurred. These it will be very difficult, if not impossible, to estimate; much patience therefore must be maintained by the parties interested: and it may eventually happen that they must be content to dispense with compensation for their past sacrifices in order to secure an unrestricted and profitable trade for the future.

The history of the commercial relations between Great Britain and Naples affords a most instructive lesson upon the uselessness of one country seeking to obtain a commercial advantage from another without rendering an equivalent for it; and of the extreme folly and mischief of commercial reprisals. For a long period previous to 1816, the British flag, as well as that of France and Spain, possessed certain privileges in the ports of Naples and Sicily. Among these was the right of exemption from search by the customs, which obviously opened a wide

door to smuggling, and rendered any attempts of the Sicilian Government to repress that practice almost useless. These privileges, Great Britain gave up by the treaty of 1816, in exchange for a remission of 10 per cent. in the duty upon British goods imported in British ships into the Sicilian dominions. Similar treaties were contracted about the same time with France and Spain. But this new privilege was found to be so injurious to the commerce of the Two Sicilies, that within a short time a similar advantage was granted to national vessels, and the following privileges were further granted to the national commerce, and were not extended to that of any other country. First, a remission of 10 per cent. upon the duties of exportation. Secondly, the export duty upon oil, shipped in national vessels, was reduced one-third, (from 30 to 20 grains per stajo,) and the tonnage dues on such vessels carrying oil were fixed at one third below the amount paid by foreign vessels, viz. 67 grains, instead of one ducat, or 100 grains. Thirdly, national vessels were allowed to export grain and vegetables of all kinds free from the duty which was imposed upon similar exports made in foreign vessels. This privilege, however, has been subsequently modified, if not entirely abandoned. Fourthly, a remission of 20 per cent. in the duties on merchandise imported in national vessels from the Baltic, and of 30 per cent. in those upon imports in such vessels from the East or West Indies, in addition, in both cases, to the 10 per cent. above mentioned upon importations from all countries. Fifthly, the tonnage dues upon national vessels, were fixed at 4 grains per ton, while the charge upon foreign vessels amounted to 40 grains per ton.

By these means the Neapolitan Government hoped to restore to the national shipping the share which it had lost in the commerce of the country, and to a certain extent they succeeded; but the favour thus shown to their own commerce, and to the shipping of England and France, effectually excluded the shipping of all other countries from Sicilian ports, and induced the governments of several to lay very heavy differential duties upon Sicilian commerce visiting their ports. This occurred in Norway, Sweden, Prussia, Austria, and even in France and the United Kingdom; and thus the advantages which Sicilian shipping possessed in its own country was neutralized by the disadvantages under which it laboured in other countries. It must also be mentioned that a further encouragement was offered to the Sicilian marine, in the year 1818, by exempting the cargoes of new ships, above 200 tons in size, from the payment of all export duties during the first two years after construction.

All these measures, however, failed either in creating a substantial marine, or in placing the commerce of the country upon a sound and prosperous footing.* In the mean time the impatience of the British Government to conclude a treaty of reciprocity with regard to navigation dues increased, but the Sicilian Government took no steps to meet them

* This fact, as regards the first point, is shown, in a striking manner, by a comparison of the Sicilian with the Sardinian commercial marine. The former amounted, in 1837, to 7,800 ships of 150,634 tons, averaging therefore less than 20 tons each; while the latter, in the same year, amounted to 3,013 ships of 159,548 tons, averaging 53 tons each; although the shore of the continental dominions of the King of Sardinia, to which the comparison alone applies, is much less extensive than that of Naples, and the population is a third less.

upon this point. Consequently the former adopted the measure of imposing a further differential duty upon Neapolitan oil, which excluded it entirely from the British market. On the other hand, the Sicilian Government has established a monopoly of the sulphur trade, which has inflicted serious injury upon British commerce; and it is not at all improbable that, if that measure be maintained, further reprisals might be tried on the part of Great Britain in order to avoid the last resource, so much to be deprecated on every account, of an appeal to force. Thus from one false position, one vicious arrangement, in the early intercourse of the two countries, a commerce which might have been most profitable to both, where each had that to offer in exchange which the other did not possess, was nipped in the bud, and which, after successive injuries arising from the attempts of both parties to defeat the consequences of the vicious system by which they were enthralled, is at the present moment almost annihilated.

It is, therefore, greatly to be desired that the new treaty, to which it is stated that the Sicilian Government has agreed, should be free from the fundamental error of the former treaty, and that the time may soon arrive when not only Naples and Great Britain, but every country in the world, will find that it is the best policy in commerce not to ask for a favour without granting an equivalent, nor to seek for an advantage to the exclusion of their neighbours; and that the best guarantee for the commercial prosperity of a nation is the independence and impartial reciprocity of its commercial relations with other countries. R.

Statistics of the Labouring Classes and Paupers in Nottingham.

(Communicated by W. FELKIN, Esq., F.S.S.)

THE limits of the borough, which forms the boundary of the Nottingham Union, contained, in 1831, 10,407 inhabited houses, and 10,901 families, 435 uninhabited houses, and 136 houses in process of construction. The number of inhabitants was 50,680.

About 1,200 acres of common and partly open land surround the town, and are included in the borough. The impossibility of getting sufficient land close to the town, as sites for houses, has forced a population of about 20,000 persons to become located just beyond this encircling belt of common land. Within the town, which now consists of about 11,000 houses, the parish officers state that there are from 7,000 to 8,000 houses constructed back to back, having no means of thorough ventilation, and generally without other than a common convenience to several dwellings: 200 dwellings are under long dressing rooms, places used for finishing lace, which are heated to 80° or upwards 200 are in barracks, or flats with a common open staircase; there are more than 100 built over common conveniences; and there are between 100 and 200 low kitchen dwellings.

At the time when Nottingham was first visited with cholera, many rows of houses were found to be placed upon the drains, which were shallow, and, being without arches, were covered simply with the boards of the sitting-room floors. These, when shrunk by heat, allowed

noxious smells, and often other offensive matters, to arise. The health and morals of the residents are found to suffer greatly from so peculiar a state of their dwellings, which is believed by the writer to have a direct tendency to increase pauperism.

The intensity of a trade panic and its dreadful operation upon a manufacturing population, as well as its effect in bringing industrious work-people in contact with pauperism against their wills, may be in some degree shown by the following contrast of the money paid in this Union to assist the destitute poor, with the number of recipients in 1836-37, which was a year of considerable prosperity; and in 1837-38, when the full effect of the change in trade was felt. The average number of paupers in ordinary times may be estimated at 500 in the Union house, and 1,000 dependent upon out-door relief. In June, 1836, 350 persons were in the house, and 700 were supported out of it; total 1,050—the year's expense was 11,628*l*. In January, 1838, 1,000 persons were supported at one time in the house, besides 600 who were fed there daily: 450 heads of families were employed upon work of a public utility, at wages sufficient to support 1,800 persons; and about 2,000 persons were entirely dependent upon regular out-door relief, making a total of 5,850, being one-ninth of the whole population. In this year there was a public subscription of 5,000*l*., which, added to 21,139*l*., being the amount of the Union cost of maintaining the poor, made a total of 26,139*l*.

It was found by enumeration that in March, 1838, 1,155 houses were shut up, including many retail shops, of which seven were capitally situated in the market-place. It has been ascertained that the families thus dispossessed have usually become tenants of one or two rooms each in the dwellings of others in the town. The pawnbrokers were unable to receive the amount of property offered in pledge, and it was thrown away by forced sales in the public streets.

On the 17th February, 1839, there were 565 inmates in the Union house. Of these 240 were children under 16 years of age; 199 between 16 and 60; and 126 above 60 years, averaging nearly 69 years. Of the children, 27 were infants under 2 years of age; 124 were between 2 and 9 years of age; and 89 between 9 and 16: 156 were legitimate; and 84, or 35 per cent., were illegitimate: 46 had both their parents alive, but paupers in the house; 73 had mothers by whom they were acknowledged, but who were either in the house or were unable to support them; 65 were deserted by their parents, and 56 were orphans. These last three classes, amounting to 194, must therefore look up to the Guardians of the Union for protection, education, and the means of setting out in life usefully and creditably. Of the 199 persons between 16 and 60 years of age, 28 only were able-bodied men out of employ; 42 were imbecile or insane; 15 were infirm and helpless; 32 sick; 11 defective in sight or hearing; 63 deserted wives, widows, or unmarried mothers; and 8 whose husbands or wives were in the house for one of the above causes.

The following is a general classification of the apparent reasons for which the parties were in the house:—*Trade*, 71: viz., out of employ, &c., 67; destitute vagrants, 4. *Providence*, 357: viz., orphans, 33; widows, 57; age and infirmity, 160; imperfections, or loss of sight or

hearing, 17; sickness, 34; mild insanity and total imbecility, 56. *Crime*, 199: viz., felonies, 14; desertion, 79; illegitimacy and unchastity, 106. In this classification 62 persons are enumerated more than once as orphans, infirm, or in want of employment; also felons and others from the same cause.

The number of cases receiving out-door relief in the week ended 11th March, 1839, was 596, viz., 9 blind, 9 crippled, 16 idiots or lunatics; 244 infirm men (having about 48 wives), widows and single women, averaging altogether 70 years of age; 10 orphans; 54 widows, having 254 children; and 154 sick, chiefly families, including 80 wives and 255 children. These 596 cases comprised 1,233 individuals. The weekly cost was 71*l.* 8*s.* 8*d.*, which averaged 2*s.* 4½*d.* each case, or 1*s.* 2*d.* per head. This low average, considered in combination with the advanced age of the greater part of the recipients, proves that private benevolence must be active in furnishing the requisite additional amount for the support of the parties.

On the 19th February, 1839, there were 749 out-patients, and 84 in-patients in the Nottingham Dispensary, total 833. The number of infirm out-patients was 490, and of in-patients 132, total 622. Of this number probably 400 live in the borough. The out-patients that day under the care of the medical officers of the Union Dispensary were 270. The total number of persons receiving gratuitous medical relief was 1,503, which is about an average number. The probable population was then 56,000.

PROCEEDINGS OF STATISTICAL SOCIETIES.

STATISTICAL SOCIETY OF LONDON.

First Ordinary Meeting, 1839-40. Monday, 18th November, 1839.

JAMES HEYWOOD, Esq., F.R.S., V.P., in the Chair.

The following gentlemen were proposed as candidates for admission:—

Charles Holt Bracebridge, Esq., Atherstone Hall, Warwickshire.

John Irving, Esq., Jun., Richmond Terrace.

Alfred Austin, Esq., Sidmouth Street.

R. Weale, Esq., Assistant Poor Law Commissioner.

James Wilson, Esq., Holland Street, Blackfriars.

Seymour Tremenhore, Esq., Lincoln's Inn.

J. R. Parker, Esq., Jun., West Strand.

The following gentlemen were elected:

Major Chartres, Senior United Service Club.

Henry Hutchins, Esq., Chapel Street, Belgrave Square.

It was announced,

That, Joseph Fletcher, Esq., had been elected a member of the Council, and Honorary Secretary, in the place of Charles Hope Maclean, Esq., deceased.

That, Thomas Tooke, Esq., David Urquhart, Esq., and William Felkin, Esq., had been appointed representatives of the Society at the last meeting of the British Association, at Birmingham; and

That, John Capper, Esq., of Ceylon, had been appointed a Corresponding Member of the Society.

A Paper was read, On the Decline of Education in Belgium. By Rawson W. Rawson, Esq., Hon. Sec. (See p. 385.)

Second Ordinary Meeting. Monday, 16th December, 1839.

T. R. EDMONDS, Esq., in the Chair.

The following gentlemen were proposed as candidates for admission :

Samuel Stocks, Esq., Heaton Norris, Manchester.

John Southerden Burn, Esq., Registration Commission.

Thomas Robinson, Esq., Augustus Square, Regent's Park.

James Annesley, Esq., Albany, Piccadilly.

It was announced that the council had balloted for, and do recommend to the Society as foreign honorary members,—

M. Ducpetiaux, of Brussels.

M. Villermé, of Paris.

M. Meidinger, of Frankfort.

M. Gioja, of Florence.

M. Mallet, of Geneva.

The following gentlemen were elected :

Charles Holt Bracebridge, Esq., Atherstone Hall, Warwickshire.

John Irving, Esq., Jun., Richmond Terrace.

Alfred Austin, Esq., Sidmouth Street.

R. Weale, Esq., Assistant Poor Law Commissioner.

James Wilson, Esq., Holland Street, Blackfriars.

Seymour Tremenheere, Esq., Lincoln's Inn.

J. R. Parker, Esq., Jun., West Strand.

It was announced that M. Moreau de Jonnès of Paris had presented, in proof sheets, part of the printed Tables of the Agricultural Statistics of France : for which were voted the thanks of the Society.

The attention of the meeting was directed to an abstract of the Report of a recent elaborate inquiry instituted by the Town Council of Leeds, into the physical circumstances, and the social and moral condition of the population of that town; (See p. 397,) and Mr. Baker, a member of the Town Council, under whose superintendence the inquiry had been conducted, being present, obligingly offered a series of statements explanatory of the nature, objects, and results of this important investigation.

A paper on the Commercial Statistics of Ceylon, by John Capper, Esq., Corresponding Member, was presented and briefly explained. (See p. 424.)

A paper was then read, showing the results of the trial of the Society's form for registering the statistics of criminal offenders, by the Rev. J. Clay, Chaplain to the House of Correction at Preston, and containing an extract from the report of the Rev. T. Burnet, Chaplain to the House of Correction at Lewes, upon the intellectual and religious attainments of prisoners in that gaol. (See p. 442).]

STATISTICAL SOCIETY OF ULSTER.

The second anniversary meeting was held on Tuesday, the 19th November, Capt. Portlock, R. E., in the chair.

The report of the council for the last session was read, from which it appears, that the society has been engaged in several important investigations during the period which has elapsed since the last anniversary meeting; particularly in procuring returns on the state of education in Ulster, several parishes of which were stated to be already perfected. A grant was given to the committee for this important inquiry, to enable them to employ a paid agent, to assist in making out a report on education in Belfast, similar to those contributed to the proceedings of the British Association from the larger towns of Great Britain. A committee was also authorized to proceed with an inquiry into the linen trade of this country, on the suggestion of the Rev. John Bradshaw, who had attended the last meeting of the British Association, on the part of this society, to propose a grant of money to assist in carrying out this useful object. The office-bearers for the ensuing year were then appointed.

A further List of Statistical Papers printed by the Houses of Parliament during the present Session of 1839.—(Continued from p. 380.)

HOUSE OF COMMONS.

Nos.

- 333 (4) Borough Courts—Officers, Salaries, Suits, Debts sued for and recovered, Costs, Fees, &c., in each Court, 1835-37.
- 398 Fresh Fruit Trade—Report of Select Committee.
- 447 Turnpike Trusts—Annual Returns, 1837.
- 460 Jury Causes, Scotland—Number tried since abolition of Jury Court.
- 472 Woods and Forests—Annual Report of Commissioners, 1839.
- 491 London to Holyhead Roads—Annual Report of Commissioners, 1839.
- 515 Crown Lands, Ireland—Report of Commissioner, 1839.
- 517 Railways—Second Report of Select Committee.
- 520 Private Business—Report of Select Committee.
- 522 Private Bills—List presented in present Session, and progress.
- 523 Jamaica and British Guiana—Further Papers on State of.
- 528 Coffee from West Africa—Correspondence respecting admission.
- 536 (1 and 2) Emigration—Report of Agent General, and Correspondence with the Colonies.
- 537 Clergy Reserves, Canada—Sale and Application of Proceeds, 1827-38, &c.
- 540 Public Works, Ireland—Money voted, 1800-39.
- 548 Newspaper Stamps—Number issued to each Paper, 1836-38.
- 552 East India Company—Territorial Revenues, 1834-37.
- 555 Tithes Commutation—Agreements, January to June, 1839; Proceedings; Appointments.
- 558 British Hardwares and Woollens—Duties in Foreign Countries, 1815-39.
- 561 Upper Canada—Revenue, Debt, and Expenditure, 1833-38.
- 565 Deaths by Poison—Number of Coroners' Inquests in England and Wales, 1837-38.
- 567 Parliamentary Papers—Receipts and Expenditure from Sale of, 1836-38.
- 568 Postage—Treasury Minute; advertising for Plans for new System.
- 571 Registration of Deeds Office, Dublin—Receipts and Expenditure, 1833-38.
- 572 New South Wales—Nature and Amount of Revenue, 1824-37.
- 573 Lichfield Grammar School—Sums paid out of Crown Revenues, 1836-33.
- 574 Houses of Parliament—Report on selection of Stone for Building.
- 576 Coffee—Imports from the Cape of Good Hope, 1838-39.
- 577 Tithe on Hops—Parishes in which Extraordinary Tithe exists.
- 581 Jamaica—Further Communications on State of the Island.

Fruitfulness of Marriages in France. Communicated by the Rev. H. L. JONES, Corresponding Member of the Statistical Society of London.

M. HIPPOLYTE PASSY, in a paper, lately communicated to the Academy of Moral and Political Sciences, "On the division of property and its influence on the distribution of wealth," remarks, that in Europe marriages are generally less fruitful in large towns than in small ones, and in these than in the country. Thus in France, from 1826 to 1836, there were born annually, on an average, 904,702 legitimate children; and as the annual average number of marriages was 256,947, it follows that there have been produced by each marriage rather more than 3·52 children. In those towns of France which contain 20,000 inhabitants and upwards, and which are 39 in number, there is a total population of 2,634,532 persons, among whom, from 1826 to 1836, there have been on an average 65,290 legitimate births per annum, and 21,274 marriages; which numbers give 3·05 children for each marriage. This number is less than the general average number for the whole of France by 0·47, and less than the corresponding number for towns with populations under 20,000 by 0·51. This difference is believed to depend, in some of the large towns, on the composition of their population; the numbers being by no means the same for each. Those that possess the greatest number of wealthy families are found to be the least productive, while those that are filled with a manufacturing or maritime population attain, in this respect, higher numbers. The six towns where marriages are the *least* fruitful are Mans, Tours, Versailles, Angers, Caen, and Clermont-Ferrand; the average numbers being from 2·45 to 2·74 for each marriage. The six towns where marriages are the *most* fruitful are St. Etienne, Nismes, Boulogne, Marseilles, Dunkirk, and Limoges; the average number being from 3·56 to 3·75 for each marriage. In these latter towns, where the population is employed to a considerable extent in manufactures and other laborious occupations, the number is greater than the general average number for France. Similar proportions exist for the towns of the same department, compared with each other, according as they are more or less manufacturing. The results presented by the city of Paris are very conclusive on this point; the fecundity of marriages in each arrondissement being found to vary in almost exactly the inverse ratio of the wealth of each of these districts. Thus the most opulent arrondissement, the 2nd, does not give two children for each marriage; whereas the poorest, the 12th, gives 3·24. The following is a table of the annual average proportion of births for each marriage in each arrondissement, calculated on the average of five years from 1832 to 1836:—

No.	Births.	No.	Births.	No.	Births.
2	1·87	4	2·38	8	2·72
10	1·94	9	2·39	1	2·8
3	2·	7	2·57	5	2·89
11	2·12	6	2·59	12	3·24

This view is to a certain extent borne out by historical facts. The ancient families of Greece, and more especially of Rome, were always complained of as rapidly becoming extinct. In some modern countries

the *noblesse* of the second order is kept up only by the multiplication of letters patent of creation. Thus, in some of the provinces of Holland, there does not exist a single family of those formerly inscribed on the registers of the equestrian order. At Berne, at the end of the last century, there remained only one half of the noble families who attained a permanent seat in the councils of the state during the 16th century. Almost all the great historical families in all countries have become extinct.

NOTE BY THE EDITOR.

In England, it appears from two papers by Mr. T. R. Edmonds, published in the *Lancet*, 10th February, 1838, and 9th March, 1839, that in the year 1834 there were only 74 titles in the English peerage which had endured more than four generations, or more than 133 years; and of these only 13 had descended in a direct line for as many as six generations. Of this small number two (Huntly and Essex) have since passed into collateral branches by the death of their holders, and three others will most probably do so upon the decease of the present peers. On comparing the mortality among the ancient peerages with that among the more modern, it was found that at ages under 40 the mortality of the total occupants of the ancient titles is considerably greater than that of the occupants of modern titles. Some improvement however has taken place in this respect during the last century, as the mortality of occupants of ancient titles during the last four generations has been less than that of their predecessors.

Quarterly Averages of the Weekly Liabilities and Assets of the Bank of England, in the Quarters ended 15th October, 12th November, and 10th December, 1839, and in the corresponding Quarters of the preceding Year. (Continued from page 381.)

Quarters ended.	LIABILITIES.			ASSETS.		
	Circulation.	Deposits.	Total.	Securities.	Bullion.	Total.
1838.	£.	£.	£.	£.	£.	£.
16th October .	19,359,000	9,327,000	28,686,000	22,015,000	9,437,000	31,452,000
16th Nov. . . .	18,900,000	8,913,000	27,813,000	21,171,000	9,339,000	30,510,000
11th Dec. . . .	18,469,000	9,033,000	27,502,000	20,707,000	9,362,000	30,069,000
1839.						
15th October .	17,612,000	6,734,000	24,346,000	24,939,000	2,525,000	27,464,000
12th Nov. . . .	17,235,000	6,132,000	23,367,000	23,873,000	2,545,000	26,418,000
10th Dec. . . .	16,732,000	5,952,000	22,684,000	22,764,000	2,887,000	25,651,000

Aggregate Amount of Notes circulated in England and Wales by Private Banks, and by Joint Stock Banks and their Branches, respectively, in each of the Quarters ended 29th June and 28th September, 1838-39. (Continued from p. 382.)

Quarters ended.	1838.			1839.		
	Private Banks.	Joint Stock Banks.	Total.	Private Banks.	Joint Stock Banks.	Total.
	£.	£.	£.	£.	£.	£.
29th June . . .	7,383,247	4,362,256	11,745,503	7,610,708	4,005,110	12,275,818
28th Sept. . .	7,083,811	4,281,151	11,364,962	6,917,657	4,167,313	11,084,970

An Account of the Quantities of Foreign and Colonial Wheat and Wheat-Flour imported, paid Duty, and remaining in Warehouse, in each of the Months ended 10th October, 5th November, and 5th December, 1839. (Continued from p. 382.)

Months ended	WHEAT.			WHEAT-FLOUR.		
	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.	Imported.	Paid Duty.	Remaining in Warehouse at the end of the Month.
	Qrs.	Qrs.	Qrs.	Cwts.	Cwts.	Cwts.
10th Oct.	407,200	774,642	2,892	67,267	129,630	19,613
5th Nov.	132,565	113,503	16,223	44,972	33,911	27,221
5th Dec.	60,896	7,162	69,805	55,039	36,074	43,078

Average Septennial Prices of Corn per Imperial Bushel in England and Wales, calculated pursuant to the Tithe Commutation Act, in each Year, from 1835 to 1838.

Average of Seven Years, ended Christmas				Wheat.	Barley.	Oats.
				s. d.	s. d.	s. d.
1835	.	.	.	7 0 $\frac{1}{4}$	3 11 $\frac{1}{2}$	2 9
1836	.	.	.	6 8 $\frac{1}{2}$	3 11 $\frac{1}{4}$	2 9
1837	.	.	.	6 6 $\frac{3}{4}$	3 11 $\frac{1}{4}$	2 8 $\frac{3}{4}$
1838	.	.	.	6 6 $\frac{1}{4}$	3 9 $\frac{3}{4}$	2 8

Average Prices of Corn per Imperial Quarter, in England and Wales, with the Rate of Duty on Foreign Wheat, during each Week, from 27th Sept. to 20th Dec. 1839; also the Average Prices of each Month, and of the Quarter ended Michaelmas, 1839.—(Continued from p. 382.)

DATE.	WHEAT.			WEEKLY AVERAGE.				
	Weekly Average.	Aggregate Average.	Duty on Foreign.	Barley.	Oats.	Rye.	Beans.	Peas.
Weeks ended	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Sept. 27	70 1	70 10	10 8	40 4	28 10	38 3	44 7	43 5
Oct. 4	70 4	70 9	10 8	40 8	26 9	38 1	46 0	44 2
„ 11	67 2	70 0	10 8	41 2	25 9	37 9	46 1	44 11
„ 18	65 6	68 11	16 8	41 0	25 5	38 7	45 6	45 0
„ 25	66 5	68 2	16 8	41 3	25 4	38 5	45 5	46 1
Nov. 1	66 5	67 8	18 8	41 3	25 8	37 9	45 0	46 2
„ 8	67 4	67 2	18 8	41 4	26 0	36 1	45 7	45 2
„ 15	68 6	66 11	20 8	42 7	26 4	39 1	46 3	44 9
„ 22	69 0	67 2	18 8	43 1	26 5	37 4	46 1	45 1
„ 29	67 1	67 5	18 8	41 6	25 10	38 3	45 1	43 8
Dec. 6	66 3	67 5	18 8	40 3	25 8	38 5	44 7	43 6
„ 13	65 8	67 4	18 8	39 8	24 9	39 1	44 11	43 3
„ 20	66 8	67 2	18 8	40 9	24 3	37 10	43 4	42 7
<i>Months.</i>								
September	70 6	70 4	..	39 7	27 4	39 5	43 6	42 6
October	67 4	69 5	..	41 0	25 9	38 2	45 9	45 0
November	67 8	67 3	..	41 11	26 0	37 8	45 7	44 11
<i>Quarter ended Michaelmas</i>	70 5	..	..	38 8	27 0	43 0	42 2	41 6

An Abstract of the Net Produce of the Revenue of Great Britain in each of the Years and Quarters ended 10th October, 1838 and 1839.

Description.	Years ended 10th October,			
	1838.	1839.	Increase.	Decrease.
	£.	£.	£.	£.
Customs	18,823,619	19,915,296	1,091,677	..
Excise	11,827,788	12,152,171	324,383	..
Stamps	6,636,204	6,508,523	..	127,681
Taxes	3,647,157	3,713,784	66,627	..
Post-Office	1,536,000	1,533,000	..	3,000
Crown Lands	130,000	160,000	30,000	..
Miscellaneous	44,781	103,907	59,126	..
Imprest and other Monies	481,966	499,964	17,998	..
Repayments of Advances.	501,168	756,009	254,841	..
Total Income . . .	43,628,683	45,342,654	1,844,652	130,681

Description.	Quarters ended 10th October.			
	1838.	1839.	Increase.	Decrease.
	£.	£.	£.	£.
Customs	5,469,271	5,778,006	308,735	..
Excise	4,093,959	4,113,159	19,200	..
Stamps	1,751,476	1,699,724	..	51,752
Taxes	328,045	311,283	..	16,762
Post-Office	410,000	407,000	..	3,000
Crown Lands	65,000	40,000	..	25,000
Miscellaneous	8,376	17,654	9,278	..
Imprest and other Monies	28,424	41,426	13,002	..
Repayments of Advances.	194,524	234,045	39,521	..
Total Income . . .	12,349,075	12,642,297	389,736	96,514

Total Increase on the Year, £1,713,971; total increase on the Quarter, £293,222.

An Abstract of the Income and Charges of the Consolidated Fund in each of the Quarters ended 10th October, 1838 and 1839.

INCOME.			CHARGE.		
Description.	Quarters ended 10th October.		Description.	Quarters ended 10th October.	
	1838.	1839.		1838.	1839.
	£.	£.		£.	£.
Customs	3,990,050	4,484,752	Permanent Debt . .	3,416,521	3,409,271
Excise	4,115,757	4,133,334	Terminable Annuities	1,391,897	1,409,975
Stamps	1,751,476	1,699,724	Interest on Exchequer Bills . . . }	23,869	27,799
Taxes	328,045	311,283	Sinking Fund . . .	96,411	96,370
Post Office	410,000	407,000	Civil List	372,135	332,299
Crown Lands	65,000	40,000	Other Charges . . .	126,000	230,761
Miscellaneous	8,376	17,654	Charge for Advances.		
Imprest and other Monies	28,424	41,426			
Repayments of Advances	194,524	234,045			
Total	10,891,652	11,369,218	Total Charge . . .	5,426,833	5,506,668
Cash applied to pay off Deficiency Bills. . }	..	230,000	The Surplus . . .	5,464,819	6,092,558
Total Income . . .	10,891,652	11,599,218	Total	10,891,652	11,599,218

An Analysis of Bankruptcies in England and Wales, showing the Counties and Trades in which the same occurred, during each Month from September to November 1839.—(In continuation of Account at Vol. II., p. 384.)

COUNTIES.	Sept.	Oct.	Nov.	TRADES.	Sept.	Oct.	Nov.
Bedford . . . . .	..	..	..	<i>Persons connected with Manufactures.</i>			
Berks	1	..	2				
Bucks . . . . .	..	..	1				
Cambridge . . . . .	..	..	..	Cotton Trade . . .	4	2	9
Chester	3	1	3	Woollen do. . . .	1	2	6
Cornwall	1	..	1	Silk do. . . . .	..	..	1
Cumberland	1	..	..	Linen do. . . . .	..	..	..
Derby . . . . .	..	1	2	Iron do. . . . .	..	..	2
Devon	4	4	1	Iron Wares do. . .	1	1	1
Dorset . . . . .	..	1	..	Building	3	..	8
Durham	1	..	1	Miscellaneous . . .	5	..	11
Essex . . . . .	..	1	2				
Gloucester	1	1	4	<i>Agriculture.</i>			
Hants	1	..	1	Farmers . . . . .	..	..	..
Hereford	1	1	1	Corn, Hay, and Hop } Dealers, Millers. }	3	8	3
Herrford	1	..	..	Cattle and Wool } Dealers }	2	2	2
Huntingdon . . . . .	..	..	..	Coaches & Horses .	..	2	3
Kent	1	2	1	Brewers, Maltsters, } and Distillers . . }	4	1	2
Lancaster	28	13	27				
Leicester . . . . .	..	..	1	<i>Other.</i>			
Lincoln	1	1	3	Innkeepers and Vic- } tualisers }	4	7	10
Middlesex	9	17	46	Merchants, Ware- } housemen, Agents, }	14	17	27
Monmouth . . . . .	..	..	..	Brokers, Ship- } owners, & Whole- }			
Norfolk	1	1	2	sale Dealers . . .			
Northampton . . . . .	..	..	1	Tradesmen, Shop- } keepers, & Retail }	26	29	55
Northumberland . . . . .	..	..	3	Dealers }			
Nottingham . . . . .	..	1	..	Miscellaneous . . .	..	3	8
Oxford	2	..	..		
Rutland . . . . .	..	..	..	
Salop. . . . .	..	1	2				
Somerset	2	..	2				
Stafford . . . . .	..	4	4				
Suffolk	1	..	1				
Surrey . . . . .	..	3	8				
Sussex	1	3	4				
Warwick	1	4	10				
Westmoreland . . . . .	..	..	..	
Wilts . . . . .	..	..	..	
Worcester . . . . .	..	1	..				
York	4	11	11				
Wales.	1	2	3				
Total in 1839 . . .	67	74	148	Total in 1839 . . .	67	74	148
Total in 1838 . . .	47	47	63				

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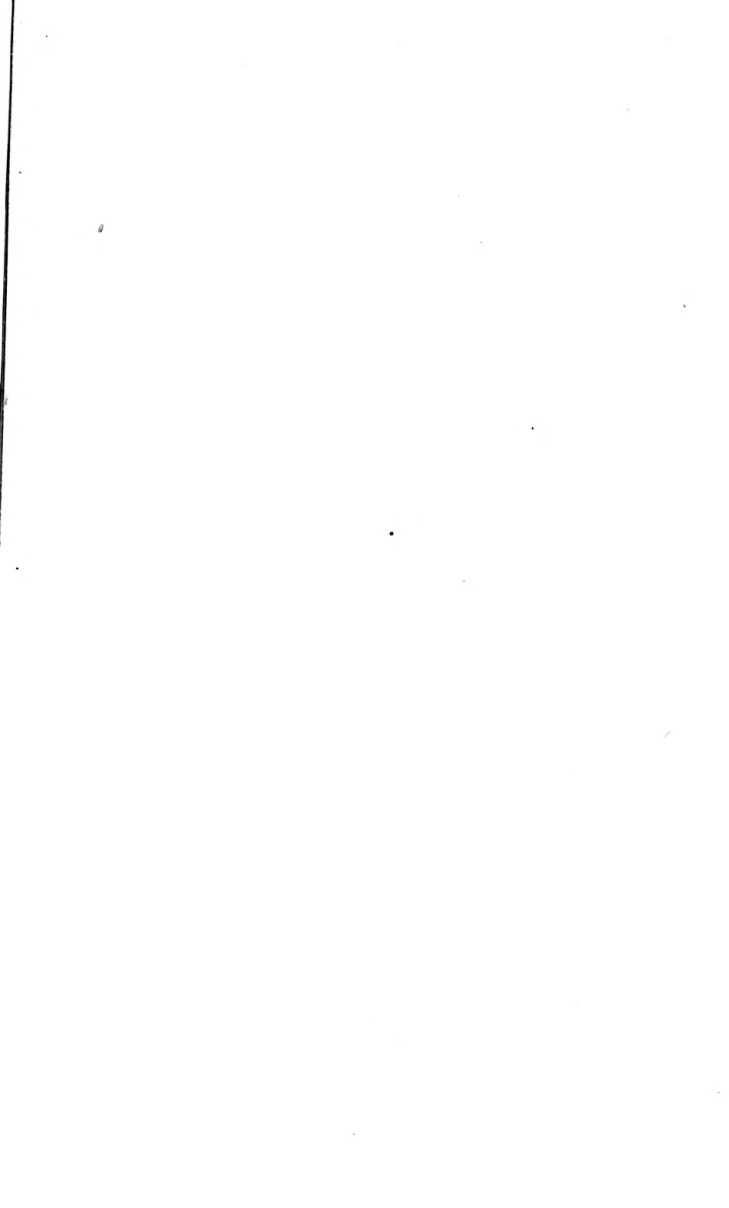
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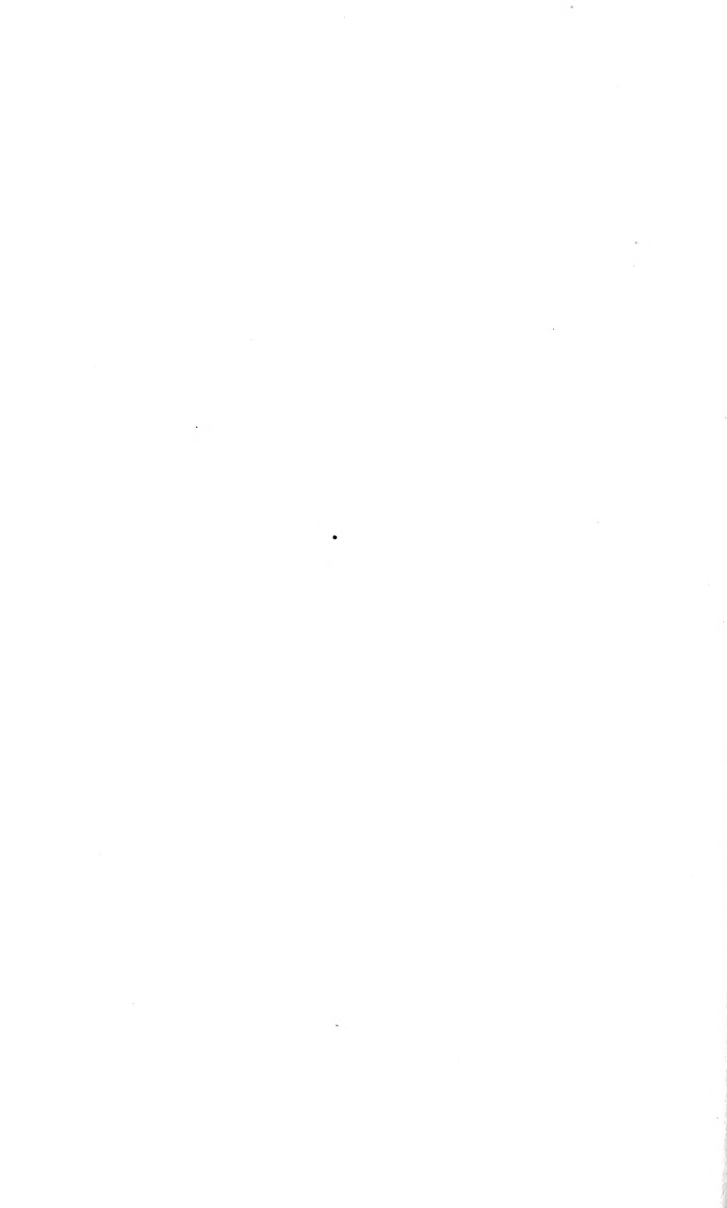
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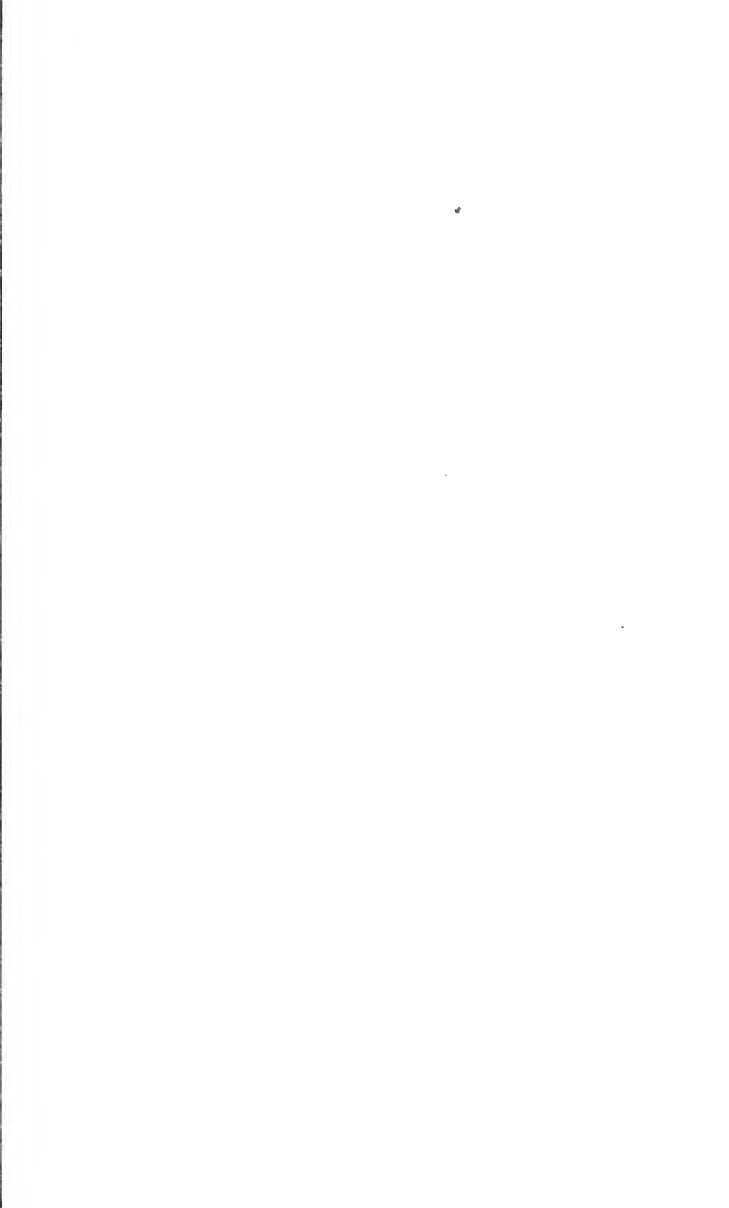
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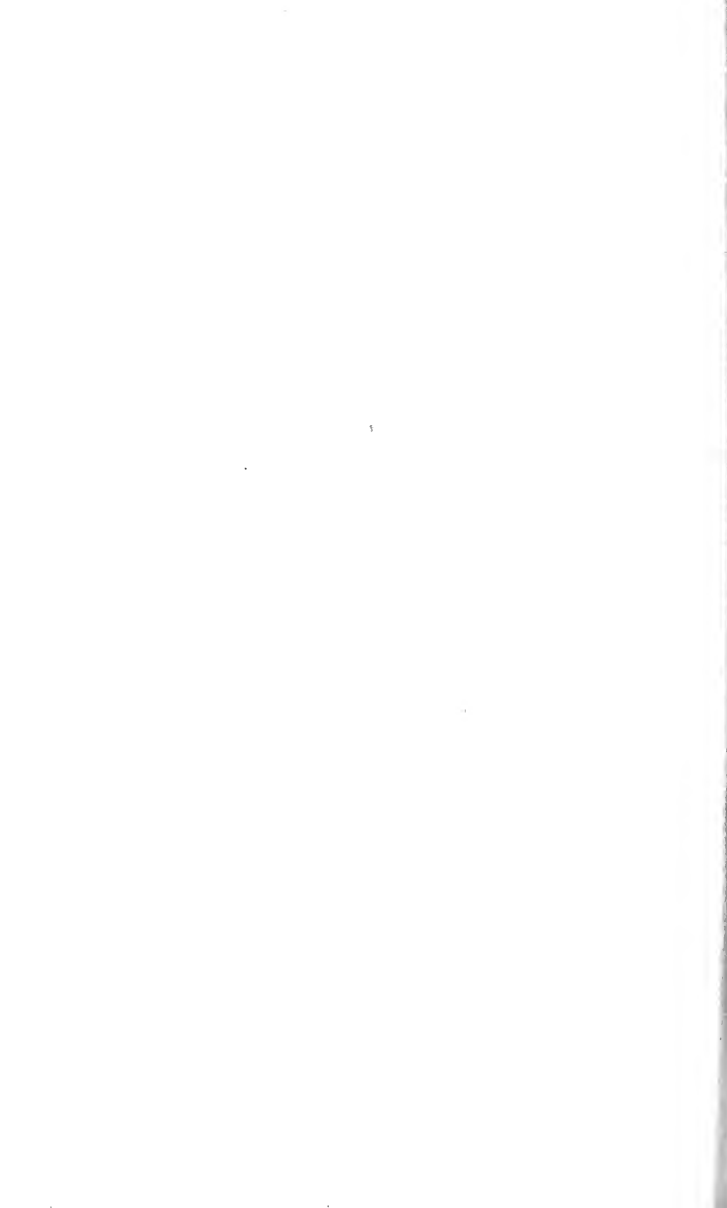
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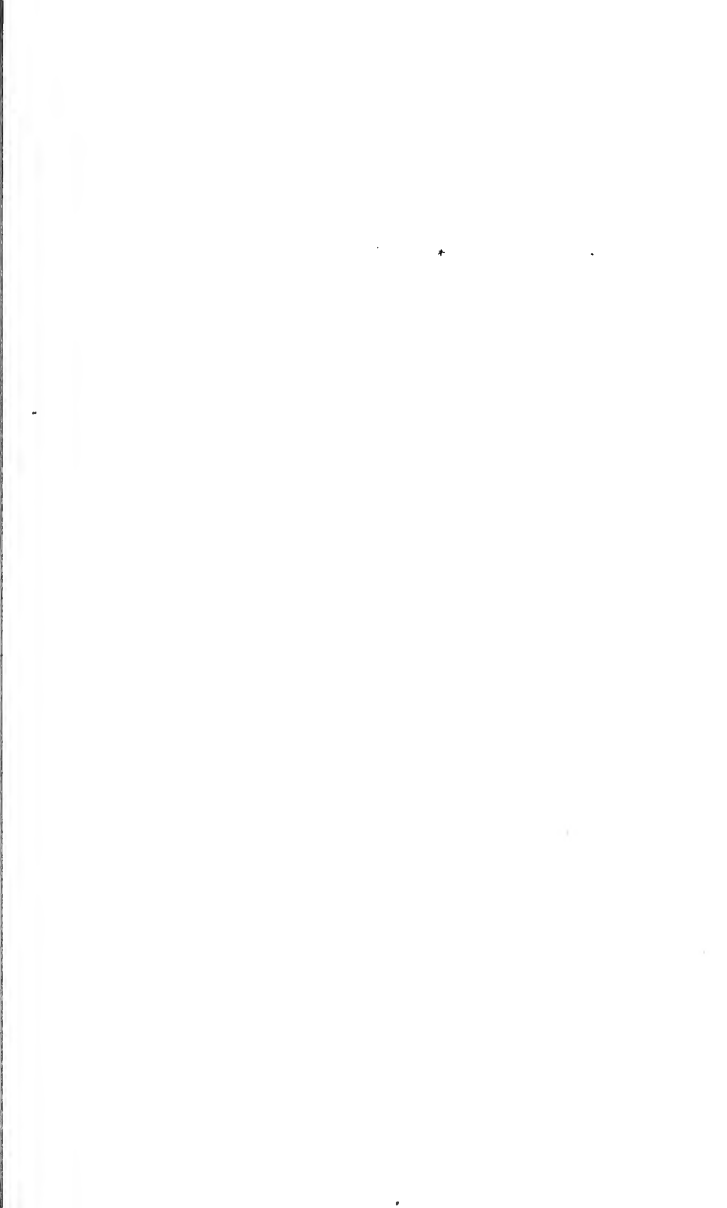
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